





HUSKY OIL NPRI OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRIA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 9-24-80 Time 0600  
 Present Depth 917' Previous Depth 320' Footage 24 Hrs. 597'  
 Formation(s) TOROK Top Surface  
 Present Activity: RIH

LITHOLOGIC DESCRIPTION

Interval Reported 217-900' Sampling Interval 30 ft. Sample Quality poor - fair  
 Lag Time: 7.5 min. @ 900 ft.

Interval	Description	Avg. Drill Rate min./ft.
270-280'	Sltst: a/a.	0.9
280-290'	Clyst: lt gy brn, ptly slty, rr gy slty Sh	1.3
290-343'	Intbdd Sltst: lt gy, clayey, v. sl sdy; w/Clyst lt gy - lt gy brn, sdy, rr Cht pbls; Sd, loose, med - crs grn, sa, occ grnls; crinoid and shell frags, some coal grns and chips.	0.8
343-350'	Sd: loose, med - crs grn, sa Qtz, Cht and coal grns.	0.8
350-440'	Intbdd Sltst, Clyst, and Sd: a/a; occ forams.	1.0
440-456'	Sd: loose, varicolored, f. - med grn, sa-sr Qtz, Cht, coal and mafic grns, pyritic, tr glau; some shell frags.	0.6
456-577'	Intbdd and Intlam Clyst: v. lt gy, v. sft, sdy, sl slty; w/Sltst, v. lt gy, clayey, sft, ptly sdy; and Sd, loose, varicolored, f. - med grn a/a, w/shell frags; occ gy firm arg limey Sltst strgs and incl. s.	0.8
577-588'	Sltst: gy, limey, arg, carb flks, fos frags; w/ls strks, gy, slty, arg, firm.	1.8
588-854'	Sltst: v. lt gy, v. sft, clayey, w/gy limey Sltst incl. pyr incl. Cht pbls, rr echinoids, shell frags, occ Ls incl. and strgs, tr coal; occ intbdd Clyst.	1.3
854-860'	Ss: lt gy, v.f. grn, sa, v. sft, clayey, tt.	0.6
860-900'	Intbdd Clyst: v. lt gy, v. slty; w/Sltst, v. lt gy, clayey, gy limey Sltst incl. and strgs; occ gy and lt brn Ls strgs and incl. s, varicolored Cht grnls and pbls, occ pyr incl. s.	1.3

GAS OCCURENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C1	C2	C3	C4	C5
273'	108		55	115	15000				
338'	200		115	121	13000				
375'	138		121	126	14000	tr			
570'	140		126	131	14000	2000			
733'	140	72	131	100	12000	1000			
820'	144	80	100	120	10000	1100			

Ditch Gas (Units): Background 99 Connection - Trip - Peaks a/a

Mud: Wt 9.4 Vis 40 W.L. - ph - cc Oil - % Cl<sub>2</sub> - Temp. 53 °F. in 60 °F. out

Data Unit:

Depth	Dc Exponent	Depth	Dc Exponent	Depth	Dc Exponent
300'	1.05	600'	0.96	900'	1.09
350'	0.98	650'	0.99		
400'	1.03	700'	1.03		
450'	1.03	750'	0.97		
500'	1.06	800'	0.95		
550'	0.95	850'	1.04		



HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 9-25-80 Time 0600  
 Present Depth 1354' Previous Depth 917 Footage 24 Hrs. 437'  
 Formation(s) TOROK Top Surface  
 Present Activity: Coring, cutting Core #1 (top core at 1350')

LITHOLOGIC DESCRIPTION

Interval Reported 900-1350' Sampling Interval 30/10 at 1300' Sample Quality poor  
 Lag Time: 12.2 min. @ 1350 ft.

Interval	Description	Avg. Drill Rate min./ft.
900-1145'	Intbdd Clyst and Sltst; lt gy - v. lt gy, sft, varicolored Cht pbls, limey Sltst incl; w/thn lt gy, v.f. grn Ss strgs below 1050'.	1.2
1145-1217'	Sltst; v. lt gy to med gy, ptly clayey, carb flks, varicolored Cht pbls com, carb Sh and Sltst incl, pyr incl, tr coal; occ Ss and arg Ls incl; occ Clyst bd.	1.8
1217-1230'	Ss: lt - med gy, v.f. - f. grn, sa, mod w. srted, slty, clayey, sft, fri, sl carb - coaly, fair por, dull yel spl fluor, lt yel streaming cut.	1.0
1230-1247'	Clyst: lt - med gy, slty, sft, abnt pbls and incl a/a.	2.1
1247-1253'	Ss: a/a at 1217'.	1.5
1253-1297'	Sltst: lt - med gy, clayey, sft; w/intbdd Ss, lt gy - gy, v.f. grn, dull yel spl fluor, lt yel streaming cut; w/Clyst lt gy, sft.	1.7
1297-1305'	Ss: lt gy, v.f. - f. grn, sa, ptly slty, v. clayey, sl carb, fair por, pale yel - bright yel spl fluor, instant lt yel streaming cut.	1.0
1305-1333'	Intbdd Clyst and Sltst; a/a w/occ shell frag.	1.7
1333-1350'	Ss: lt gy brn, v.f. grn, sa, mod w. srted, slty, clayey, carb w/coal incl, some f. grn strks, sft, fri, rr glau, poor - fair por, lt yel - bright yel fluor, slow lt yel cut, in pt streaming, appears to be some oil str; occ Sltst inthds.	2.1

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C1	C2	C3	C4	C5
1105'	160		85	78	8300				
1250'	256		78	157	14000	4500			
1310'	240		157	180	10000	500			

Ditch Gas (Units): Background 125 Connection 500 @ 1264' Trip 200 @ 1350' Peaks a/a  
 280 @ 1327'  
 500 @ 1295'

Mud: Wt. 9.3 Vis 41 W.I. - ph - cc Oil - % Cl<sub>2</sub> - Temp. 49 °F. in 51 °F. out

Data Unit:

Depth	Dc Exponent	Depth	Dc Exponent
950'	1.04	1250'	1.04
1000'	1.00	1300'	1.05
1050'	1.05	1350'	1.07
1100'	1.07		
1150'	1.10		
1200'	1.08		

Geologist RON BROCKWAY



HUSKY OIL N/P OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 9-26-80 Time 0600  
 Present Depth 1400' Previous Depth 1354' Footage 24 Hrs. 46  
 Formation(s) PEBBLE SHALE Top 1373' (?)  
 Present Activity: Reaming out core hole, cut Core #1 1350-1371'; barrel jammed. Cut Core #2 1371-1400'; barrel jammed.

LITHOLOGIC DESCRIPTION

Interval Reported 1350-1400' Sampling Interval core ft. Sample Quality good  
 Lag Time: 12.5 min. @ 1350 ft.

Interval	Description	Avg. Drill Rate min./ft.
1350-1371'	Core #1, Cut 21', Recovered 12' (57%)	15.0
	1350-1362' (12') - Sh: gy brn, fis, flky to poker chip, micromica, carb flks; w/v. thn brn slitst prgs and lams (up to 15% of rock); bdg hztl, frac throughout core at 85°; bdg planes, frac planes and slitst lams have sl wtr wet looking hydrocarbon stn, lt blue to yel spl fluor, instant lt yel - blue cut, fair gas odor.	
	1362-1371' (9') - No recovery; core barrel jammed at 1371'	15.0
1371-1400'	Core #2, Cut 29', Recovered btm 18'; remainder is jammed in top of core bbl, have not been able to remove it at report time.	
	1371-1382' (11') - Jammed in core bbl at report time; all efforts to recover it have failed.	15.0
	1382-1400' (18') - Sh: dk brn - gy, fis, flky, micromica, occ dis pyr xls and f. pyr incls, fish frags com, occ altered fos frags, thn coat ptg at 1397'; core highly frac and slickensided, bdg very vague; appears to be 3° 1395-1400'; tr bentonite 1395-1400'.	
	NOTE: CONTACT BETWEEN TOROK FM AND PEBBLE SH IS SOMEWHERE BETWEEN 1362' and 1382'; IT COULD BE IN THE PORTION LOST AT THE BASE OF CORE #1, OR IN THE PART OF CORE #2 JAMMED IN THE BARREL.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)					
			Before	After	C1	C2	C3	C4	C5	
1355'	120		100	68	8000					

Ditch Gas (Units): Background 49 Connection - Trip 65 @ 1371' Peaks a/a

Mud: Wt. 9.2 Vis 40 W.L. - ph - cc Oil - % Cl<sub>2</sub> - Temp. 47 °F. in 51 °F. out

Data Unit:

Depth	Dc Exponent	Dc Exponent	Pore Pressure
1350'	1.08		
1400'	1.57		

Geologist RON BROCKWAY



HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 9-27-80 Time 0600  
 Present Depth 1520' Previous Depth 1400' Footage 24 Hrs. 120'  
 Formation(s) PEBBLE SHALE Top 1373' (log top)  
 Present Activity: Circ to cmt csg, 9 5/8" run to 1519'

LITHOLOGIC DESCRIPTION

Interval Reported 1400-1520' Sampling Interval 10' ft. Sample Quality v. poor  
 Lag Time: 13 min. @ 1500 ft.

Interval	Description	Avg. Drill Rate min./ft.
1400-1410'	Sh: dk gy brn. ptly slty, fis. tr fish frags; tr bent Sh, lt gy.	1.5
1410-1422'	Sd: lse, f. - med grn, sr-sa, pred Qtz, occ Cht grns, prob Cly filled, occ Sltst strg.	0.8
1422-1443'	Sh a/a, becoming v. carb, tr bent Sh a/a, Sltst lams.	1.8
1443-1450'	Sd a/a, w/tr glau.	1.3
1450-1475'	Sh a/a, w/tr bent Sh; w/Ss strgs, pyr incl.	2.3
1475-1520'	Intbdd Sh and Sd a/a; w/tr Ss, v. lt gy - gy, v.f. - f. grn, sa, glau, sft, fri, poor - fair por.	1.7
RAN SCHLUMBERGER LOGS AS FOLLOWS:		
	DIL/GR/SP	106-1513'
	BHCS/GR	106-1508'
	HRD (Dipmeter)	106-1517'
	Log Top "Pebble Shale"	1373'

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C1	C2	C3	C4	C5
1436'	200		60	99	11000	3500			
1454'	970		99	320	71000	3000			
1505'	640		320	320	21000	Tr			

Ditch Gas (Units): Background 60-240 Connection - Trip - Peaks a/a

Mud: Wt. 9.3 Vis 45 W.L. - ph - cc Oil - % Cl<sub>2</sub> - Temp. 54 °F. in 57 °F. out

Data Unit:

Depth	Depth	Dc Exponent	Pore Pressure
	1450'	1.01	
	1500'	1.09	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)	1350-1371' (Core Spls)	1	
Cores	No. 1, 1350-1371'	4	











HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-1-80 Time 0600  
 Present Depth 1703' Previous Depth 1520' Footage 24 Hrs. 183'  
 Formation(s) "PEBBLE SHALE" Top 1372'  
 Present Activity: RIH w/core barrel for Core #3 (to attempt coring contact Pebble Sh - Kingak Fm).

LITHOLOGIC DESCRIPTION

Interval Reported 1520-1700' Sampling Interval 10 ft. Sample Quality v. poor  
 Lag Time: 14.1 min. @ 1700 ft.

Interval	Description	Avg. Drill Rate min./ft.
1520-1557'	Sh: dk brn gy, fis, carb, occ rd Qtz grns, tr bent Sh; w/intbdd Ss, lt brn to lt gy, v.f. - f. grn, sa-sr; and Sltst, lt gy - gy brn, tr wh calc (prob frac fill).	1.7
1557-1562'	Ss: lt gy, v.f. - f. grn, sr-sa, sl clyey, slty, fri, fair por, gold fluor, instant lt yel streaming cut.	1.3
1562-1569'	Sh: brn gy, carb, fis.	1.7
1569-1573'	Ss: a/a w/fluor and cut a/a.	1.2
1573-1590'	Sh: brn gy a/a w/Lg strg @ 1580'.	1.8
1590-1617'	Intbdd Ss lt gy - gy, f. v.f. grn, sa-sr, carb w/coal grns, tr pyr, gold spl fluor, instant lt yel streaming cut; w/Sltst brn gy, shly, carb; and Sh, dk gy brn, carb.	0.9
1617-1626'	Ss: lt gy - lt brn gy, f. - v.f. grn, sa-sr, carb, clyey, rr glau, poor - fair por, dull vel spl fluor, pale vel streaming cut.	0.7
1626-1637'	Intbdd Sh and Sltst, gy - brn, mica, carb.	0.8
1637-1645'	Ss: a/a at 1617', poor - fair por, spl fluor and cut a/a.	0.5
1645-1672'	Intbdd Ss, Sltst, and Sh, a/a.	1.3
1672-1676'	Ss: lt gy brn, f. grn, sa-sr, carb, occ v. crs Qtz grns, rr Cht grns, scat v. dull gold spl fluor, v. slow med yel cut.	1.2
1676-1700'	Intbdd Ss, Sltst and Sh a/a; Sltst brn gy, carb, sl mica; Sh dk gy brn, sl mica, fis, occ glau pels, pyr inclc, tr tn siderite.	1.8

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)					
			Before	After	C1	C2	C3	C4	C5	
1565'	320		22	55	54000	Tr				
1610'	320		55	60	65000	10000				
1628'	300		60	60	64000	10000				
1655'	236		60	60	50000	8500				
1695'	200		60	60	41000	7000				

180 @ 1684'  
 320 @ 1653'  
 Ditch Gas (Units): Background 89 Connection 320 @ 1621' Trip 65 @ 1520' Peaks a/a

Mud: Wt. 9.1 Vis 43 W.L. 18 ph 8.5 cc Oil 46000 % Cl<sub>2</sub> 56 Temp. 59 °F. in 59 °F. out

Data Unit:

Depth	Depth	Dc Exponent	Pore Pressure
	1550'	1.09	
	1600'	1.15	
	1650'	0.97	
	1700'	1.09	



HUSKY OIL & GAS OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-2-80 Time 0600  
 Present Depth 1813' Previous Depth 1703' Footage 24 Hrs. 110'  
 Formation(s) KINGAK Top 1758' (spl top)  
 Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 1700-1763' Sampling Interval Core ft. Sample Quality good  
 Lag Time: 15.7 min. @ 1800 ft.

Interval	Description	Avg. Drill Rate min./ft.
1700-1703'	A/a.	
1703-1763'	Core #3, Cut 60', Rec. 60' (100%)	6-15
1703-1730.2' (27.2')	Intbdd Ss: gy brn, dk brn, v.f. grn, slty and shly, carb. tr. w/occ med - v. crs rd Qtz grns and dk Cht pbls, rr glau. a thin 6" hd @ 1707-1707.5' has fair por, bright vel fluor, lt vel strng cut; w/Sltst brn gy - dk gy brn, sdy, shly, carb, mica, occ pyr inclc and pyr replaced plant and wood frags; in 1/8" to 8' bds, avg 2' thick.	
1730.2-1744.7' (14.5')	Sh: dk - v. dk gy, v. sdy, carb, slty, w/pyr plant frags and some fish frags; w/Sltst gy brn 1739-1742'.	
1744.7-1757.0' (12.3')	Sh: v. dk brn, gy, carb, sdy, slty, sd grns are rd Qtz grns, Cht pbls com, w/intbdd Ss, dk gy - dk gy brn, rd - sr, rd Qtz grns, in pt cgl w/dk Cht pbls (to 3.5" in dia.).	
1757-1757.6' (0.6')	Cgl, loose Cht and Qtz pbls, S&P, to 2" in dia, tr v. lt gy clyey Sltst, tr lt gy Clyst, v. sl spl fluor, v. faint cut.	
1757.6-1758' (0.4')	Sh: gy, slty, micromica, occ Ss inclc, tr glau, becomes lt gy at 1757.8'.	
1758-1761.5' (3.5')	Sltst: lt gy, shly, micromica, pyr replaced plant remains, brachiopod at 1760'.	
1761.5-1763 (1.5')	Sh: lt gy, clyey, v. slty, firm, micromica, w/vert frags (may be mechanically induced).	

NOTE!  
OCT 6 1980  
PVC

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
1708'	1225		83	140	40000	4000			
1723'	240		140	140	15000	Tr			
1758'	240		140	178	18000	2000			

Ditch Gas (Units): Background 158 Connection - Trip 356 @ 1763' Peaks a/a

Mud: Wt. 9.8 Vis 43 W.L. 7.0 ph 8.0 cc Oil - %Cl<sub>2</sub> 50000 Temp. 70 °F. in 72 °F. out

Data Unit:

Depth	Depth	Dc Exponent	Pore Pressure
	1750'	1.83 (coring)	
	1800'	1.22	

Geologist RON BROCKWAY



HUSKY OIL NFR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL: BARROW #18 Date 10-3-80 Time 0600  
 Present Depth 2020' Previous Depth 1813' Footage 24 Hrs. 207'  
 Formation(s) KINGAK; U. BARROW Top 1758'; 1963'  
 Present Activity: POH w/Core #4 (cut 30' from 1990-2020')

LITHOLOGIC DESCRIPTION

Interval Reported 1763-1990' Sampling Interval 10 ft. Sample Quality poor - fair  
 Log Time: 18.1 min. @ 2000 ft.

Interval	Description	Avg. Drill Rate min./ft.
1763-1830'	Intbdd Clyst, lt tanish gy, slty, occ sd grns; w/Sltst lt tn - gy, clyey, glau, sl mica; occ Ss, v. lt tn gy, v.f. grn, sa, glau, slty, clyey, pyr incl.	3.5
1830-1867'	Sltst, lt tn gy - lt brn, clyey, sideritic, sl calc, glau pels, sl sdy; w/intbdd Clyst, lt tn gy, slty, sft strks, w/some Sh, gy brn.	3.0
1867-1875'	Ss, lt brn, v.f. grn, sa, sideritic, glau, sl calc, NOSCF.	2.8
1875-1945'	Intbdd Sltst, a/a w/glau pels; w/Clyst a/a, and Sh, lt brn gy - brn, slty, sft; and Ss, v. lt gy, sa, v.f. grn, v. fri, Cly mtx, 2-3' bd at 1919' w/good med vel spl fluor, lt blue - yel cut fluor.	4.0
1945-1949'	Ss, wh, sl S&P, v.f. grn, sa-sr, v. fri; rr glau, NOSCF.	2.5
1949-1963'	Clyst, v. lt gy, sdy, slty; Sltst, v. lt gy, sl carb.	4.0
1963-1968'	Ss, wh, v. lt gy - lt tn, sl S&P, f. grn, sa, clyey, glau pels com - abnt, fair por, coal strgs, NOSCF.	2.3
1968-1978'	Sltst and Sh, intbdd, lt gy brn, mica, tr pyr, sl carb.	6.0
1978-1990'	Ss, v. lt gy, lt tn, f. - v.f. grn, sa, fri, glau pels on grns com, occ carb grns, fair por, NOSCF; w/intbdd and lam Sh.	4.5
1990-2020'	Cut Core #4; POH at report time.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
1925'	278		87	106	13000	Tr			
1960'	263			106	12000	1000			
1990'	620	rrip gas				61000			

Ditch Gas (Units): Background 173 Connection 276 @ 1967' Trip a/a Peaks a/a  
290 @ 1937'

Mud: Wt. 10.2 Vis 46 W.L. 12 ph 8.5 cc Oil - % C<sub>2</sub> 49000 Temp. 72 °F. in 73 °F. out

Data Unit:

Depth	Shale Density	Depth	Dc Exponent	Pore Pressure
		1800'	1.18	
		1850'	1.20	
		1900'	1.18	
		1950'	1.22	
		2000'	1.31 (coring)	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	90-1800'	1	Set A. Bx #1
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)	90-1700'	1	Set A. Bx #1
GeoChem (canned)	1703-1763' (Core #3)	2	
Cores	No. 3; 1703-1763'		





HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-4-80 Time 0600  
 Present Depth 2087' Previous Depth 2020' Footage 24 Hrs. 67  
 Formation(s) L. BARROW Top 2045' (?), Btm 2078'  
 Present Activity: Wash to btm w/bit to drill rathole.

LITHOLOGIC DESCRIPTION

Interval Reported 1990-2087' Sampling Interval core ft. Sample Quality good  
 Lag Time: 18.8 min. @ 2087 ft.

Interval	Description	Avg. Drill Rate min./ft.
1990-2020'	Core #4, Cut 30', Rec. 29' (97%)	2.0 - 6.0
	1990-1999.5' - Ss: lt - v. lt brn, f. grn, sa, mod - w. srt, Cly mtx, Qtz, glau grns and pels, occ shly ptgs, 10-25% por, faint pale vel fluor, v. slow med vel cut fluor.	
	1999.5-2000.4' - Siltst: gy brn, mica, carb filks, pyr replaced plant rmns.	
	2000.4-2019' - Ss: lt tn - gy brn, f. - v.f. grn, mod srt, glau, clayey, shly ptgs, large Ammonite (?) @ 2005', nil - 15% por, faint wh - vel spl fluor, v. slow - instant cut fluor.	
	2019-2020' - NR.	
2020-2032'	Ss: lt tn gy, f. grn, sa, Cly mtx, glau, spotty vel fluor, tr wood frag.	3.2
2032-2036'	Siltst and Sh: brn gy, rr glau, tr pyr, carb wood frag.	4.1
2036-2050'	Ss: lt tn - gy, f. grn, sa, Cly mtx, glau, 5-7% por, faint lt vel cut fluor, w/Sh strgs, coal ptgs and wood frags.	2.9
2051-2072'	Core #5, Cut 21', Rec. 15.5' (74%)	
	2051-2061' - Ss: lt brn, f. - med grn, sa, mod srt, glau, Qtz, 5-25% por, dull vel spl fluor, instant med vel cut fluor, core highly frac and pulverized.	
	2061-2061.6' - Orthoqtz: lt brn, f. grn, w. rd, ptly chty, no por, large carb wood frags, vert frac, large pelecypods (?).	
	2061.6-2066.5' - Ss: lt brn, med - f. grn, sr-sa, w. srt, Qtzs, becomes clayey and v. shly at base, w/pelecypod casts and large wood frag, por decrease downward from 25-5%, lt vel fluor, instant blueish vel cut fluor, highly frac and ptly pulverized.	
	2066.5-2072' - NR	
2072-2087'	Core #6, Cut 15', Rec. 14.5' (97%)	
	2072-2079.2' - Ss: lt - v. lt brn, f. - med grn, sa-sr, mod - w. srt, Qtz, scat glau, clayey, shly incls and prgs, sl por and sil, abnt pelecypods at 2075', 5-15% por, faint odor, dull vel - gold spl fluor, instant blueish wh cut fluor.	
	2079.2-2083.7' - Ss: gy brn, v.f. grn, v. slty, shlv - mod hd: inrbdd w/ and grds to Sdy Sltst: NOSCF.	
	2083.7-2086.5' - Ss: lt gy brn, f. - v.f. grn, clayey - v. shly, fos frag, tr pyritized plant rmns, no por, NOSCF.	
	2086.5-2087.0' - NR.	



HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-5-80 Time 0600  
 Present Depth 2125' Previous Depth 2087' Footage 24 Hrs. 38  
 Formation(s) L. BARROW Top 2052' log  
 Present Activity: Rig down Schlumberger

LITHOLOGIC DESCRIPTION

Interval Reported 2087-2125' Sampling Interval 10 ft. Sample Quality poor  
 Lag Time: 29.3 min. @ 2115 ft.

Interval	Description	Avg. Drill Rate min./ft.
2087-2095'	Ss: lt - tn gy, f. - v.f. grn, clyey, sideritic, sft - hd, pctly sil, sa, rr glau; no por, NOSCF; w/intbdd Slstst: gy brn.	6.5
2095-2125'	Intbdd Slstst: gy brn - lt gy, carb - mica; w/Sh: gy brn, fis, sl carb, tr pyr incls.	14.2
<u>RAN THE FOLLOWING LOGS</u>		
	DLL/GR/SF/MSFL 1520-2112'	
	BHCS/GR/TTI 1520-2116'	
	FDC/CNL/GR/CAL 1520-2124'	
	HDT DIPMETER 1520-2120'	
Preliminary log calculation indicated U. Barrow v. tt, L. Barrow has 20' gas saturated Ss.		
<u>LOG TOPS</u>		
	KINGAK 1754'	
	U. BARROW 1974'	
	TOP L. BARROW 2052'	
	BASE L. BARROW 2072'	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)					
			Before	After	C1	C2	C3	C4	C5	
2110'	336	11	295	240	70000	1000				

Ditch Gas (Units): Background 250 Connection 274 @ 2095' Trip 484 @ 2087' Peaks a/a

Mud: Wt. 10.3 Vis 45 w.L. 15 ph 8.5 cc Oil - % Cl<sub>2</sub> 49000 Temp. 69 °F. in 71 °F. out

Data Unit:

Depth	Shale Density	De Exponent	Pore Pressure
2100'		1.38	
2125'		1.54	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist RON BROCKWAY



HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-6-80 Time 0600  
 Present Depth 2135' Previous Depth 2125' Footage 24 Hrs. 10  
 Formation(s) L. BARROW Top 2052', Btm. 2072'  
 Present Activity: Prep to cmt 7" csg, shoe at 2126'

LITHOLOGIC DESCRIPTION

Interval Reported None Sampling Interval \_\_\_\_\_ ft. Sample Quality \_\_\_\_\_  
 Lag Time: \_\_\_\_\_ min. @ \_\_\_\_\_ ft.

Interval	Description	Avg. Drill Rate min./ft.	
	Log Calculations, R <sub>w</sub> 0.25		
	<b>Formation</b> <b>Interval</b> <b>Ø %</b> <b>Sw %</b>		
	U. Barrow      1986-1994'	15	86
	U. Barrow      2000-2010'	17	62
	U. Barrow      2010-2020'	18	59
	L. Barrow      2052-2060'	23	33
	L. Barrow      2060-2066'	29	20
	L. Barrow      2066-2070'	20	50
	X-plotted avg.		
	L. Barrow      2052-2072'	23	33

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
Trip after logging	3200				500000+	140000	10000		

Ditch Gas (Units): Background - Connection - Trip a/a Peaks -

Mud: Wt. 10.3 Vis 40 W.L. 13 ph 80 cc Oil - % Cl<sub>2</sub> 48000 Temp. \_\_\_\_\_ °F. in \_\_\_\_\_ °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist RON BROCKWAY, A. KANE













HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-11-80 Time 0600  
 Present Depth 2085' Previous Depth 2085' Footage 24 Hrs. 0  
 Formation(s) L. BARROW SS Top 2052'  
 Present Activity: Production Test #1; prep to reperf zone at report time.

LITHOLOGIC DESCRIPTION

Interval Reported \_\_\_\_\_ Sampling Interval \_\_\_\_\_ ft. Sample Quality \_\_\_\_\_  
 Lag Time: \_\_\_\_\_ min. @ \_\_\_\_\_ ft.

DATE	TIME (HRS.)	ACTIVITY	CHOKE SIZE	FWHP	FBHP	BH TEMP	ESTIMATED RATE
10-10-80		Rock well in					
	2222	Open on test	10/64"	400 psi	Not recorded		
	2247	Flowing well	10/64"	470 psi	Not recorded		
	2400	Flowing well	10/64"	480 psi	Not recorded		
10-11-80	0030	Flowing well	10/64"	497 psi	Not recorded		
	0100	Flowing well	10/64"	497 psi	Not recorded		
	0130	Flowing well	10/64"	498 psi	Not recorded		
	0200	Flowing well	10/64"	499 psi	Not recorded		
	0230	Rate stabilized	10/64"	500 psi	Not recorded		
	0500	Shut well in	10/64"	500 psi	Not recorded		340 MCFPD
		SHUT IN - SHUT IN PRESSURES:		SI WHP	SI BHP		
	0600			665 psi			
	0630			690 psi			
	0700			699 psi	939 psi	48°F.	
	0730			700 psi			
	0745			700 psi			

KILLED WELL AND PREP TO RERUN CBL ACROSS LOWER BARROW SS AND REPERF ZONE.

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)					
			Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	

Ditch Gas (Units): Background \_\_\_\_\_ Connection \_\_\_\_\_ Trip \_\_\_\_\_ Peaks \_\_\_\_\_

Mud: Wt. \_\_\_\_\_ Vis \_\_\_\_\_ W.L. \_\_\_\_\_ ph \_\_\_\_\_ cc Oil \_\_\_\_\_ % C<sub>12</sub> \_\_\_\_\_ Temp. \_\_\_\_\_ °F. in \_\_\_\_\_ °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		





HUSKY OIL NPR OPERATIONS, INC.  
U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL BARROW #18 Date 10-13-80 Time 0600  
 Present Depth 2085' Previous Depth 2085' Footage 24 Hrs. 0  
 Formation(s) L. BARROW SS Top 2052'  
 Present Activity: Flow well for cleanup prior to testing.

LITHOLOGIC DESCRIPTION

Interval Reported \_\_\_\_\_ Sampling Interval \_\_\_\_\_ ft. Sample Quality \_\_\_\_\_  
 Lag Time: \_\_\_\_\_ min. @ \_\_\_\_\_ ft.

DATE	TIME (HRS.)	ACTIVITY	CHOKE SIZE	FWHP TUBING	FWHP CASING	FBHP	BH TEMP	RATE
10-13-80	0500	Flow well thru tubing	16/64"	360 psi	520 psi		46°F.	None calculate
	0600	Flow well thru tubing	16/64"	380 psi	520 psi	575 psi	46°F.	None calculate
	0730	flow well thru casing	16/64"	425 psi	500 psi	520 psi	46°F.	None calculate

WELL MISTING WATER @ 72,000 ppm chlorides at 0500 HRS. (APPEARS TO BE FILTRATE), AMOUNT OF WATER DECREASING WITH FLOW TIME.

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)					
			Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	

Ditch Gas (Units): Background \_\_\_\_\_ Connection \_\_\_\_\_ Trip \_\_\_\_\_ Peaks \_\_\_\_\_

Mud: Wt. \_\_\_\_\_ Vis \_\_\_\_\_ W.L. \_\_\_\_\_ ph \_\_\_\_\_ cc Oil \_\_\_\_\_ % Cl<sub>2</sub> \_\_\_\_\_ Temp. \_\_\_\_\_ °F. in \_\_\_\_\_ °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Porosity

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

