



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

DRILL STEM TEST REPORT FORM

WELL NAME BARROW #15 DST. NO. 1 DATE 9-7-80
 (misrun)
 Formation Tested Upper Barrow Sd. Hole Size 8 1/2"
 Test Interval 2080-2136' Drill Collar Length _____ I.D. _____
 Total Depth 2136' Drill Pipe Length _____ I.D. _____
 Choke Size: _____ Packer Depth(s) 2080 Ft.
 Surface _____ Bottom Hole _____
 Depth Tester Valve _____ Ft.
 Cushion Type None Amount _____

TEST DATA

Tool open at Approx 0800 hrs.
 Initial flow period _____ min.
 Initial shut-in period _____ min.
 Final flow period _____ min.
 Final shut-in period _____ min.
 Unseated packer at _____ hrs.

RESISTIVITY/CHLORIDE DATA

Recovery Water None Resistivity @ _____ °F. Chloride Content _____ ppm
 Recovery Mud _____ @ _____ °F. _____ ppm
 Recovery Mud Filtrate _____ @ _____ °F. _____ ppm
 Mud Pit Sample _____ @ _____ °F. _____ ppm
 Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm
 Mud Weight 10.2 vis 41 cp

Description of initial flow period Packers failed after approx 3 min of initial open; no pressures recorded

Description of final flow period _____

PRESSURE DATA

TEMPERATURE	Gauge No. Depth: ft.		Gauge No. Depth: ft.		Gauge No. Depth: ft.		TIME			
	Est.	°F.	Hour Clock	Blanked Off	Hour Clock	Blanked Off	Hour Clock	Blanked Off	Tool	A.M.
Actual	°F.	Pressures	Field	Office	Field	Office	Field	Office	Reported	Computed
Initial Hydrostatic									Minutes	Minutes
First Period	Initial									
	FLOW Final									
	Closed In									
Second Period	Initial									
	FLOW Final									
	Closed In									
Third Period	Initial									
	FLOW Final									
	Closed In									
Final Hydrostatic										

RECOVERY DATA

Cushion	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered		Feet/bbl of			
Recovered		Feet/bbl of			
Recovered		Feet/bbl of			
Recovered		Feet/bbl of			

Remarks Misrun



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DRILL STEM TEST REPORT FORM

WELL NAME BARROW #15 DST. NO. 2 DATE 9-7-80
(misrun)
Formation Tested UPPER BARROW SD Hole Size 8 1/2"
Test Interval 2095-2136' Drill Collar Length 528.74 I.D. 2.25
Total Depth 2136' Drill Pipe Length - I.D. 2.602
Choke Size: Surface 1/8" & 1/4" Bottom Hole 3/4" Packer Depth(s) 2095 Ft.
Depth Tester Valve - Ft.
Cushion Type None Amount -

TEST DATA

Tool open at 1621 hrs.
Initial flow period approx. 22 min.
Initial shut-in period _____ min.
Final flow period _____ min.
Final shut-in period _____ min.
Unseated packer at (approx.) 1700 hrs.

RESISTIVITY/CHLORIDE DATA

	Resistivity	Chloride Content
Recovery Water	<u>None</u> @ _____ of.	_____ ppm
Recovery Mud	@ _____ of.	_____ ppm
Recovery Mud Filtrate	@ _____ of.	_____ ppm
Mud Pit Sample	@ _____ of.	_____ ppm
Mud Pit Sample Filtrate	@ _____ of.	_____ ppm
Mud Weight	<u>10.2</u> vis	<u>41</u> cp

Description of initial flow period Opened with immediate mod blow increasing to strong blow in 11 min w/SFP of 360 psi thru 1/8" choke, SFP declined to 350 psi in 16 min, further declined to 220 psi in 23 min and 50 psi in 34 min.
Description of final flow period _____

PRESSURE DATA

TEMPERATURE	Gauge No. Depth: _____ ft.		Gauge No. Depth: _____ ft.		Gauge No. Depth: _____ ft.		TIME			
	Est.	Of.	Blanked Off	Hour Clock	Blanked Off	Hour Clock	Blanked Off	Hour Clock	Tool Opened	A.M.
Actual	Of.		Pressures		Pressures		Pressures		Reported	Computed
			Field	Office	Field	Office	Field	Office	Minutes	Minutes
Initial Hydrostatic										
First Period	FLOW	Initial								
		Final								
		Closed In								
Second Period	FLOW	Initial								
		Final								
		Closed In								
Third Period	FLOW	Initial								
		Final								
		Closed In								
Final Hydrostatic										

RECOVERY DATA

Cushion	None	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered	None		Feet/bbl of			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			

Remarks No fluid recovery on reverse out, well started to flow after reverse out.



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DRILL STEM TEST REPORT FORM

WELL NAME BARROW #15 DST. NO. 3 DATE 9-9-80

Formation Tested UPPER BARROW SD Hole Size 8 1/2"
 Test Interval 2105-2136' Drill Collar Length 603.64 I.D. 2.25
 Total Depth 2136' Tool Length 74.9
 Drill Pipe Length 1537.25 I.D. 2.602
 Choke Size: 1/8", 24/64" Packer Depth(s) 2105' (top lower pkr) Ft.
 Surface 20/64" Bottom Hole 3/4" (?) Depth Tester Valve NA Ft.
 Cushion Type None Amount _____

TEST DATA

Tool open at 1211 hrs 9-8-80 hrs.
 Initial flow period 63 min.
 Initial shut-in period 63 min.
 Final flow period 122 min.
 Final shut-in period 240 min.
 Unseated packer at 2119 hrs 9-8-80 hrs.

RESISTIVITY/CHLORIDE DATA

Resistivity Chloride Content
 Recovery Water None @ _____ OF. _____ ppm
 Recovery Mud _____ @ _____ OF. _____ ppm
 Recovery Mud Filtrate _____ @ _____ OF. _____ ppm
 Mud Pit Sample _____ @ _____ OF. 45000 ppm
 Mud Pit Sample Filtrate _____ @ _____ OF. _____ ppm
 Mud Weight 10.2 vis 41 cp

Description of initial flow period Opened w/immediate strong blow thru 1/8" choke, increase to v. strong blow in 2 min. w/SFP 400 psi, GTS in 4 min, SFP increase to 830 psi in 22 min and stabilized thru remainder of FP.

Description of final flow period Opened thru 24/64" choke w/SFP of 200 psi increasing to SFP 290 psi in 20 min and declined to 230 psi in 25 min, changed to 20/64" choke w/SFP 245 psi; SFP slowly declined to 200 psi at end of FP. Calculated final flow rate approx. 500 MCFPD.

PRESSURE DATA

TEMPERATURE	Gauge No.	Gauge No. 62		Gauge No. 13		TIME	
	Depth: ft.	Depth: 2132 ft.		Depth: 2136 ft.			
Est. 55 OF.	Blanked Off	48 Hour Clock		48 Hour Clock		Tool A.M. Opened P.M.	
Actual NR OF.	Pressures		Pressures		Pressures		Opened A.M. Bypass P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes Computed Minutes
Initial Hydrostatic			1178.1		1174.2		
First Period FLOW	Initial		253.0		251.2		
	Final		946.6		938.5		
	Closed In		965.8		970.5		
Second Period FLOW	Initial		296.7		295.2		
	Final		267.8		283.2		
	Closed In		965.8		962.5		
Third Period FLOW	Initial						
	Final						
Final Hydrostatic			1178.1		1170.2		

RECOVERY DATA

Cushion <u>None</u>	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke	Acc. From Tracer Valve
Recovered		Feet bbl of				
Recovered		Feet bbl of				
Recovered		Feet bbl of				
Recovered		Feet bbl of				

Remarks Chromatograph analysis indicates 95% methane. After test, circulated out 3040 units gas.

No indication of water or hydrocarbon fluids in tools or during test.

Collected 3 gas spls during IFP and 1 gas sample during FFP.



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DRILL STEM TEST REPORT FORM

WELL NAME BARROW #15 DST. NO. 3 DATE 9-9-80

Formation Tested UPPER BARROW SD Hole Size 8 1/2"

Test Interval 2105-2136' Drill Collar Length 603.64 I.D. 2.25

Total Depth 2136' Tool Length 74.9

Drill Pipe Length 1537.25 I.D. 2.602

Choke Size: 1/8", 24/64", Packer Depth(s) 2105' (top lower pkr) Ft

Surface 20/64" Bottom Hole 3/4" Depth Tester Valve 2069' Ft

Cushion Type None Amount _____

TEST DATA

Tool open at 1211 hrs 9-8-80 hrs.

Initial flow period 63 min.

Initial shut-in period 63 min.

Final flow period 122 min.

Final shut-in period 240 min.

Unseated packer at 2119 hrs 9-8-80 hrs.

RESISTIVITY/CHLORIDE DATA

	Resistivity	Chloride Content
Recovery Water	<u>None</u> @ _____ °F.	_____ ppm
Recovery Mud	@ _____ °F.	_____ ppm
Recovery Mud Filtrate	@ _____ °F.	_____ ppm
Mud Pit Sample	@ _____ °F.	<u>45000</u> ppm
Mud Pit Sample Filtrate	@ _____ °F.	_____ ppm
Mud Weight	<u>10.2</u> vis	<u>41</u> cp

Description of initial flow period Opened w/immediate strong blow thru 1/8" choke, increase to v. str blow in 2 min. w/SFP 400 psi, GTS in 4 min, SFP increase to 830 psi in 22 min and stabilized thru remainder of FP.

Description of final flow period Opened thru 24/64" choke w/SFP of 200 psi increasing to SFP 290 psi in 20 min and declined to 230 psi in 25 min, changed to 20/64" choke w/SFP 245 psi; SFP slowly declined to 200 psi at end of FP. Calculated final flow rate approx. 500 MCFPD.

PRESSURE DATA

TEMPERATURE	Gauge No. 32	Gauge No. 329	Gauge No. 62	Gauge No. 13
	Depth: 2073 ft.	Depth: 2077 ft.	Depth: 2132 ft.	Depth: 2136 ft.
Est.	48 Hour Clock	48 Hour Clock	48 Hour Clock	48 Hour Clock
Actual	Blanked Off	Blanked Off	Blanked Off	Blanked Off
	No	No	Yes	Yes
	Pressures	Pressures	Pressures	Pressures
	Field Office	Field Office	Field Office	Field Office
Initial Hydrostatic	1163.1	1164.3	1178.1	1174.2
First Period FLOW	Initial	113.5	165.4	251.2
	Final	928.0	932.0	946.6
	Closed In	952.0	956.1	965.8
Second Period FLOW	Initial	255.3	257.7	296.7
	Final	235.1	238.4	267.8
	Closed In	944.0	961.0	965.8
Third Period FLOW	Initial			
	Final			
	Closed In			
Final Hydrostatic	1147.8	1149.8	1178.1	1170.2

RECOVERY DATA

Cushion	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered	<u>None</u>	Feet/bbl of			
Recovered		Feet/bbl of			
Recovered		Feet/bbl of			
Recovered		Feet/bbl of			

Remarks Chromatograph analysis indicates 95% methane. After test, circulated out 3040 units gas.

No indication of water or hydrocarbon fluids in tools or during test.

Collected 3 gas spls during IFP and 1 gas sample during FFP.



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

PRELIMINARY

RD #2

DRILL STEM TEST REPORT FORM

WELL NAME BARROW #15 DST. NO. 4 DATE 9-12-80

Formation Tested LOWER BARROW SS Hole Size 8 1/2"
 Test Interval 2188-2278' Drill Collar Length 499.33 I.D. 2.25
 Total Depth 2278' Drill Pipe Length 1778.70 I.D. 2.76
 Choke Size: Surface 20/64" / Bottom Hole 3/4"
24/64" Packer Depth(s) 2182-2188' Ft.
 Depth Tester Valve 2141 Ft.
 Cushion Type None Amount N/A

TEST DATA

Tool open at 0329 hrs.
 Initial flow period 61 min.
 Initial shut-in period 120 min.
 Final flow period 120 min.
 Final shut-in period 240 min.
 Unseated packer at 1230 hrs.

RESISTIVITY/CHLORIDE DATA

Resistivity Chloride Content
 Recovery Water @ OF. 15,500 ppm
 Recovery Mud @ OF. ppm
 Recovery Mud Filtrate @ OF. ppm
 Mud Pit Sample @ OF. ppm
 Mud Pit Sample Filtrate @ OF. 48,000 ppm
 Mud Weight 10.3 vis 41 cp

Description of initial flow period Opened w/mod blow (90 psi surf pressure), decreased to weak blow TSTM in 30 min.; weak blow TSTM at shut in (no gas or fluid to surf).

Description of final flow period Opened with a weak blow TSTM, becoming v. weak in 8 min.; dead in one hour.

PRESSURE DATA

TEMPERATURE	Gauge No. 329	Gauge No. 62	Gauge No. 13	TIME
	Depth: 2136 ft.	Depth: 2274 ft.	Depth: 2278 ft.	
Est.	48 Hour Clock	48 Hour Clock	48 Hour Clock	Tool A.M.
Blanked Off	No	Yes	Yes	Opened P.M.
Actual	Pressures		Pressures	
	Field	Office	Field	Office
Initial Hydrostatic	1179.0	1255.4	1246.1	Reported Minutes
First Period FLOW	Initial 141.1	229.1	222.9	Computed Minutes
	Final 917.5	975.2	994.5	
Second Period FLOW	Initial 946.5	1014.0	1026.4	Reported Minutes
	Final 927.2	994.8	1006.4	
Third Period FLOW	Initial 956.0	1018.0	1018.4	Reported Minutes
	Final 956.0	1018.0	1070.3	
Final Hydrostatic	1179.0	1245.7	1246.1	Reported Minutes

RECOVERY DATA

Cushion	None	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered	2090		Feet/bbl of formation water			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			

Remarks Broke off 1st 3 stands fluid approx 5' in upper stand; took spls from each stand, rec. 2090' water; reversed out spl #4 from half-way on reverse out; spls 5, 6, 7 from spl chamber.

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Formation Tested LOWER BARROW SS Hole Size 8 1/2"
 Test Interval 2188-2278' Drill Collar Length 499.33 I.D. 2.25
 Total Depth 2278' Drill Pipe Length _____ I.D. _____
 Choke Size: Surface 20/64" Bottom Hole 3/4" Packer Depth(s) 2188-2186' Ft.
 Depth Tester Valve _____ Ft.
 Cushion Type None Amount N/A

TEST DATA

RESISTIVITY/CHLORIDE DATA

Tool open at 0331 hrs. Recovery Water @ _____ OF. _____ ppm
 Initial flow period 61 min. Recovery Mud @ _____ OF. _____ ppm
 Initial shut-in period 120 min. Recovery Mud Filtrate @ _____ OF. _____ ppm
 Final flow period in final flow @ report time. Mud Pit Sample @ _____ OF. _____ ppm
 Final shut-in period _____ min. Mud Pit Sample Filtrate @ _____ OF. _____ ppm
 Unseated packer at _____ hrs. Mud Weight _____ vis _____ cp

Description of initial flow period Opened w/mod. blow (90 psi surf. pressure), decreased to weak blow TSTM in 30 min.; weak blow TSTM at shut in (no gas or fluid to surf).

Description of final flow period Opened with a weak blow TSTM, becoming v. weak in 8 min.; dead in one hour.

PRESSURE DATA

	TEMPERATURE		Gauge No. Depth: ft.		Gauge No. Depth: ft.		Gauge No. Depth: ft.		TIME	
	Est.	OF.	Hour Clock		Hour Clock		Hour Clock		Tool	A.M.
			Blanked Off		Blanked Off		Blanked Off		Opened	P.M.
	Actual	OF.	Pressures		Pressures		Pressures		Opened	A.M.
			Field	Office	Field	Office	Field	Office	Bypass	P.M.
	Initial Hydrostatic								Reported	Computed
									Minutes	Minutes
First Period	FLOW	Initial								
		Final								
		Closed In								
Second Period	FLOW	Initial								
		Final								
		Closed In								
Third Period	FLOW	Initial								
		Final								
		Closed In								
	Final Hydrostatic									

RECOVERY DATA

Cushion	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke	Mud From Tester Valve	
Recovered	<u>None</u>	Feet/bbl of					
Recovered		Feet/bbl of					
Recovered		Feet/bbl of					
Recovered		Feet/bbl of					

Remarks _____

RON BROCKWAY

Prepared by

PRELIMINARY



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U.S. GEOLOGICAL SURVEY/ONPRA

DRILL STEM TEST REPORT FORM

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Formation Tested LOWER BARROW SS Hole Size 8 1/2"
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 Total Depth 2278' Drill Pipe Length 1778.70 I.D. 2.76
 Choke Size: Surface 20/64" / 24/64" Bottom Hole 3/4"
 Packer Depth(s) 2182-2188' Ft.
 Depth Tester Valve 2141 Ft.
 Cushion Type None Amount N/A

TEST DATA

Tool open at 0329 hrs.
 Initial flow period 61 min.
 Initial shut-in period 120 min.
 Final flow period 120 min.
 Final shut-in period 240 min.
 Unseated packer at 1230 hrs.

RESISTIVITY/CHLORIDE DATA

Resistivity Chloride Content
 Recovery Water @ 0F. 15,500 ppm
 Recovery Mud @ 0F. ppm
 Recovery Mud Filtrate @ 0F. ppm
 Mud Pit Sample @ 0F. ppm
 Mud Pit Sample Filtrate @ 0F. 48,000 ppm
 Mud Weight 10.3 vis 41 cp

Description of initial flow period Opened w/mod blow (90 psi surf pressure), decreased to weak blow TSTM in 30 min.; weak blow TSTM at shut in (no gas or fluid to surf).

Description of final flow period Opened with a weak blow TSTM, becoming v. weak in 8 min.; dead in one hour.

PRESSURE DATA

TEMPERATURE	Gauge No. 329	Gauge No. 62	Gauge No. 13	TIME
	Depth: 2136 ft.	Depth: 2274 ft.	Depth: 2278 ft.	
Est. 0F.	48 Hour Clock	48 Hour Clock	48 Hour Clock	Tool A.M.
Blanked Off	No	Blanked Off Yes	Blanked Off Yes	Opened P.M.
Temp gauge 50-2500 did not register				Opened A.M.
Actual 0F.	Pressures	Pressures	Pressures	Bypass P.M.
	Field Office	Field Office	Field Office	Reported Minutes
Initial Hydrostatic	1179.0	1255.4	1246.1	Computed Minutes
First Period FLOW	Initial	141.1	229.1	
	Final	917.5	975.2	
	Closed In	946.5	1014.0	
Second Period FLOW	Initial	927.2	994.8	
	Final	956.0	1018.0	
	Closed In	956.0	1018.0	
Third Period FLOW	Initial			
	Final			
	Closed In			
Final Hydrostatic	1179.0	1245.7	1246.1	

RECOVERY DATA

Cushion	None	Type	Amount	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered	2090		Feet/bbl of formation water			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			
Recovered			Feet/bbl of			

Remarks Broke off 1st 3 stands fluid approx 5' in upper stand; took spls from each stand, rec. 2090' water; reversed out spl #4 from half-way on reverse out; spls 5, 6, 7 from spl chamber.