NATIONAL PETROLEUM RESERVE IN ALASKA

HISTORY
OF
DRILLING OPERATIONS

SEABEE TEST WELL NO. 1

HUSKY OIL NPR OPERATIONS, INC.
Prepared by: S. L. Hewitt
Edited by: R. G. Brockway

For the

U. S. GEOLOGICAL SURVEY
Office of the National Petroleum Reserve in Alaska
Department of the Interior
JUNE 1983

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SEABEE TEST WELL NO. 1

INTRODUCTION

The Seabee Test Well No. 1 is located in the National Petroleum Reserve in Alaska (Figure 1). It is 1,099 feet from the south line and 1,339 feet from the east line of protracted Section 5, Township 1 South, Range 1 West, of the Umiat Meridian (Latitude: 69°22'48.519" North; Longitude: 152°10'31.291" West). Alaska State Plane Coordinates are: X = 735,330.26 and Y = 5,626,140.68, Zone 5. Elevations are: Kelly Bushing, 322', Ground, 292'.

The well was spudded on July 1, 1979, and was drilled to a total depth of 15,611 feet. It was scheduled to penetrate into the top of the Kingak Shale, testing the Nanushuk Group, the Fortress Mountain, and the "Pebble Shale" unit. Drilling was terminated in the "Pebble Shale" unit equivalent. Seabee Test Well No. 1 was abandoned, with cement and mechanical plugs set at selected intervals. The rig was released April 15, 1980.

Husky Oil NPR Operations, Inc. supervised and directed the drilling and support operations as prime contractor for the U. S. Geological Survey, Department of the Interior. Nabors Alaska Drilling, Inc. was the drilling contractor and Nabors Rig 25, a National 110, was the drilling rig used.

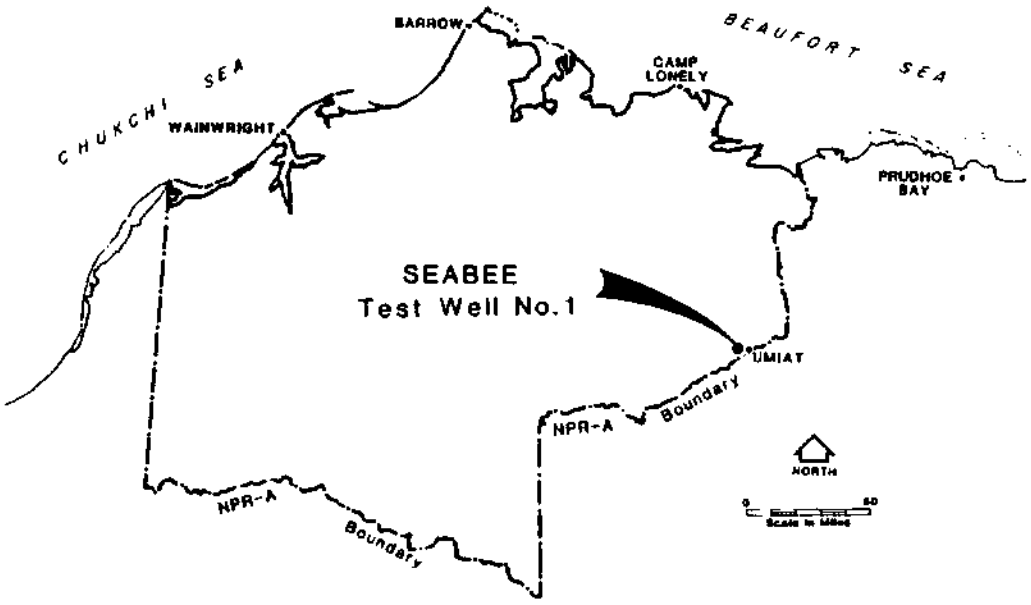

FIGURE 1 - WELL LOCATION MAP - SEABEE NO. 1

DRILLING SUMMARY

Field operations at the Seabee Test Well No. 1 commenced on January 8, 1979, with the mobilization of construction crews and equipment required to build the drilling location and upgrade the Umiat airstrip. Construction work was completed on April 2, 1979.

The rig move from Inigok Test Well No. 1 was made with Hercules aircraft. Rig move-in operations began on June 14, 1979, and were completed on June 24, 1979. Rig-up operations began June 15, 1979, and were completed in 18 days. The well was spudded July 1, 1979, at 2:30 p.m.

During rig-up, a 30" conductor was set at 115' and cemented with 1,285 sacks ArcticSet II cement. A 17-1/2" hole was drilled out below the 30" conductor to 1623', and logged with DIL/GR, FDC/CNL/GR, BHC/Sonic and HDT-dipmeter. The hole was opened to 26". Twenty-inch casing was run, and it parted two joints below the Kelly bushing. It was fished out of the hole and a 26" bit run to bottom for clean out. The 20" casing was run and landed at 1617' (driller). Each collar was welded while running casing. The casing was then cemented to surface with 3,400 sacks of ArcticSet II cement. Returns weighed 15.1 ppg. A National, weld-on type, NSB, 20" starter head was installed.

A 17-1/2" hole was drilled out below the 20" conductor to 4009'. The hole was logged from 4004' to the bottom of the 20" casing at 1618' (Schlumberger) as follows: DIL/GR, BHC-Sonic/GR, FDC/CNL/GR/CAL, HDT-Dipmeter, and Velocity Survey. After logging, 13-3/8" casing was run and landed at 3983'. It was then cemented with 1,600 sacks of Class "G" cement with 0.75% D-65 and 0.1% D-13R. Returns weighed 15.8 ppg.

A 13-5/8", 5,000 psi, SRRA blowout preventer was installed and tested. A RTTS was set at 1989' to cement through the lower FO at 1990'. Fourteen hundred and fifty sacks of ArcticSet II were pumped, with cement returns to surface after pumping 1,260 sacks. Returns weighed 15.0 ppg. The formation was tested to 0.80 psi/ft. gradient.

The mud weight was raised to 10.1 ppg and drilling was continued to 4676' where the bit sub parted. The bottom-hole assembly was fished out and the hole drilled to 5388'. At this time the well began flowing. Drill pipe shut-in pressure was 800 psi. The mud weight was increased to 14.5 ppg to control the well. Drill-Stem Test No. 1 was attempted of the interval 5340' to 5388', with the packers failing immediately on initial opening. Core No. 1 was cut from 5390' to 5402'. Drill-Stem Test No. 2 was attempted in the interval 5310' to 5402', with packers failing in 3.5 minutes of the initial flow period. Drilling continued to 6541' where Core No. 2 was cut from 6541' to 6551'.

Drilling operations were halted due to a labor dispute between Nabors Alaska Drilling and the Roughneck and Drillers Association. Husky personnel ran Schlumberger logs (DIL/GR/SP and FDC/CNL/GR/CAL from 6521' to 3983') and set a cement plug from 4100' to 3750'. A 13-3/8" Baker retrievable bridge plug was set at 3635'. The well was suspended at 6551' from August 21, 1979 to October 16, 1979.

Drilling resumed on October 21, 1979, with 14.5 ppg mud and continued to 10,004'. Logs were run as follows over the interval 9988' to 3983': DIL/GR/SP, FDC/CNL/CAL/GR, BHC-Sonic/GR, HDT-Dipmeter, Velocity Survey, and sidewall cores (shot 24; recovered 23).

Casing (232 joints of 9-5/8", 53.5#, S-95 Buttress) was run to 9980' (9977'?). The first stage was cemented with 1,200 sacks Class "G" cement with 0.75% D-65 and 0.3% D-13R. The second stage was cemented through the DV collar at 5591', using 1,600 sacks Class "G" cement with 0.75% D-65. The slurry weight of both stages was 15.8 ppg. An 11" x 10,000 psi blowout-preventer stack was nippled up. The casing was tested to 1,500 psi. The formation was tested to 17.7 ppg equivalent. Cement bond logs were run over the intervals 9876'-3800' and 3988' to surface.

Drilling was resumed with 14.6 ppg mud. Core No. 3 was cut from 10,068' to 10,098'. Drilling continued to 10,870'. Core No. 4 was cut from 10,870' to 10,884'. Drilling continued to 12,011', gradually increasing the mud weight from 14.6 to 15.9 ppg. Core No. 5 was cut from 12,011' to 12,041'. The pipe became stuck at 11,247' while pulling out of hole after drilling to 12,113'. Black magic was pumped around and let stand in the hole for 48 hours. A free-point was run indicating the pipe was stuck at 10,906'. The drill pipe was backed off at 10,911', and an overshot run onto the fish. The fish was jarred loose and recovered, and drilling continued to 12,814'. The mud weight was gradually increased to 17.0 ppg. Schlumberger logs were run as follows (could not get logs to bottom): DIL/GR/SP (12,290' to 9967') and BHC-Sonic/GR (12,772' to 9967').

A 7-5/8" liner (3,137 feet of 39#/ft., S-95 Buttress plus miscellaneous equipment) was run from 9661' to 12,814'. It was cemented with 896 sacks Class "G" cement containing 1.25% D-65, 0.27% D-13R, and 30 pounds Barite (slurry weight 18.1 ppg). The liner was tested and broke down at 1,304 psi. A 9-5/8' Howco retainer was set at 9576' and squeezed with 200 sacks of Class "G" cement. The casing and liner lap were then tested to 3,000 psi. A Sperry Sun Gyro Survey was run from 12,772' to surface. A Schlumberger CBL/VDL log was run from 12,772' to 9965' and indicated a fair to good cement bond.

The formation was pressure tested to 20 ppg equivalent after drilling the shoe and 10 feet of new hole. A 6-1/4" hole was drilled to 13,207' with 17.0 and 16.9 ppg mud. Core No. 6 was cut from 13,207' to 13,236.6'. The mud became gas cut (from 16.9 ppg to 14.9 ppg) and the mud weight was increased to 18.3 ppg to control the well. Drilling continued to 14,577'. Core No. 7 was cut from 14,577' to 14,607'. Drilling continued with tight hole conditions on connections and trips from 14,250' to 15,611'.

The pipe was stuck for short periods at 14,679', 14,750', 14,778', and 15,025'. It was twisted off at 15,611', with the top of the fish at 10,021'. The fish was retrieved with an overshot, and the pipe stuck again at 15,002' and 15,319' while reaming back to bottom. The drill pipe was twisted off while stuck at 15,319', with the top of the fish at 9689'. The fish was latched onto with an overshot and pulled loose but became stuck again while circulating. Again, the fish was pulled loose and partial recovery made. The bit, junk basket, bit sub, Monel drill collar, 17 steel

drill collars, jars, and an additional two steel drill collars were left in the hole. An overshot was run back in the hole and latched onto the fish (top at 14,811'). The fish was pulled loose and started out of the hole but was dropped when the jars tripped while working tight hole at 13,535'. The string parted at the bottom of the bumper sub. An overshot was run again and the remainder of the fish recovered.

An attempt was made to run Schlumberger logs, but the tools would not go below 13,350'. Logs recovered were: DIL/GR/SP (12,938 to 13,172) FDC/CNL/GR/CAL [9965' to 12,785 (through 7-5/8' liner)], and Temperature Log (100 to 12,750). The only log obtained below 13,172' was a Gamma Ray log run through drill pipe (12,700 to 15,490). A velocity survey was run with the top shot at 5655' and the bottom at 12,800'.

Due to continued drilling problems and a very real chance of losing the hole, a decision was made to plug and abandon the well. Plug back was started. Cement plugs were set from 14,450' to 14,250' (75 sacks) and 13,787' to 13,180' (240 sacks), using Class "G" cement with 33 pounds/sack D-76, 1.65% D-75, 0.1% D-28, and 0.2% D-46 (slurry weight 19.5 ppg). A 250-sack plug was set across the 7-5/8" shoe from 12,913' to 12,637', using Class "G" cement with 20 pounds/sack D-76, 1.25% D-65, 0.2% D-13R, and 5 pounds/sack Barite; slurry weight 19.0 ppg. A 147-sack plug was set from 9910' to 9416', using Class "G" cement with 33 pounds/sack D-76, 1.65% D-65, 0.1% D-28, and 0.2% D-46; slurry weight 19.5 ppg. A Howco E-Z drill cement retainer was set at 8401' and a 50-sack plug set above it (Class "G" cement with 30 pounds/sack Barite, 1.25% D-65, and 0.2% D-13R; slurry weight 18.1 ppg).

A decision was made to retest the high-pressure gas zone encountered around 5350', as well as to test a shallow sandstone at 2652'. Preparations were made for Drill-Stem Test No. 3. A Schlumberger CBL/VDL/GR/CCL log was run from 6000' to 1500'. The interval 5394' to 5366' was perforated with four shots per foot through the 9-5/8" casing using a 4" Hyper Jet gun (FDC/CNL/GR log was used to locate test zone). A Halliburton test tool was run and a 9-5/8" packer set at 5341'. A water cushion of 500 feet was used. Drill-Stem Test No. 3 was completed as summarized below using Haliburton Services office computed pressures from gauge depth of 5375.6':

> 1st FP (231 minutes): IHP 4,103 psi, opened tool with fair blow, GTS in 4 minutes, flowed well through 12/64" choke at 2.1 MMCFPD with 2,600 psi surface flowing pressure (SFP). Changed choke to 16/64" with 3.2 MMCFPD and 2,200 psi SFP. 1st FP pressure: 1,647 to 2,644 psi, shut in well for 242 minutes. 1st shut-in pressure: 3,640 psi.
>
> 2nd FP (234 minutes): Opened through 6/64" choke at 0.5 MMCFPD and 2,800 to 2,900 psi SFP, 2nd FP pressure 2,206 to 3,605 psi. Shut in for 362 minutes, 2nd shut-in pressure 3,638 psi.
>
> 3rd FP (179 minutes): Opened through 8/64" choke at 0.95 MMCFPD and 2,500 to 2,700 psi SFP. 3rd FP pressure 1,904 to 3,543 psi, shut in for 365 minutes, 3rd shut-in pressure 3,630 psi.

4th FP (178 minutes): Opened through 17/64" choke at 4.0 MMCFPD and 2,500 psi SFP, increasing to 4.5 MMCFPD and 2,600 psi SFP. 4th FP pressure 1,953 to 3,272 psi, shut in for 362 minutes, 4th shut-in pressure 3,617 psi.

5th FP (478 minutes): Opened through 23/64" choke at 6.7 MMCFPD (dry gas) and 2,250 psi SFP. After five hours, rate declined to 6.2 MMCFPD and 2,100 psi SFP. 5th FP pressure: 1,970 to 2,777 psi; shut in for 964 minutes, 5th (final) shut-in pressure 3,568 psi; FHP 3937 psi.

It was discovered that the chokes were washed out and had to be recalibrated.

No fluid recovered from tools or sample chamber.

As the test indicated a high-pressure, low-volume, depleting reservoir, it was plugged. A 9-5/8" Howco E-Z drill cement retainer was set at 5295', and a 150-sack cement plug set across the perforations (Class "G" cement with 0.75% D-65). The mud weight was reduced to 9.7 ppg. An attempt was made to circulate through FO at 2050' by pressuring up to 3,000 psi with no success.

Preparations were made to test the sandstone at 2652'. Perforations for Drill-Stem Test No. 4 were shot at 4 shots per foot in the interval 2652' to 2664' and Howco test tools were run. The packer was set at 2638', and testing proceeded as follows with no cushion:

Pressures given are Halliburton Services office computed pressures from gauge at 2662.64'.

1st FP (60 minutes): Opened tool through 1/4" choke with immediate strong blow, GTS in 9 minutes TSTM; maximum SFP 50 psi. IHP 1335 psi; 1st FP pressure: 132 to 124 psi; shut in for 120 minutes; 1st shut-in pressure: 1,267 psi.

2nd FP (180 minutes): Opened tool through 1/4" choke with 100 psi SFP, decreasing to 5 psi in approximately 2 hours; 2nd FP pressure: 148 to 126 psi; shut in for 375 minutes; FSIP: 1,591 psi. No fluid recovery; FHP 1,445 psi.

After completing the test, it was decided to plug the test zone. A 9-5/8" E-Z drill cement retainer was set at 2506', and the perforations were cemented with 150 sacks of Class "G" cement with 0.75% D-65 (slurry weight 15.8 ppg).

Plug back continued. The interval 1510' to 1500' was perforated at 4 shots per foot with a Schlumberger Hyper Jet gun. A Howco 9-5/8" E-Z drill retainer was set at 1478', and 773 sacks of ArcticSet II cement (15.2 ppg) were pumped. Circulation was lost while cementing. At the conclusion of cementing, 10 barrels of cement were left on top of the retainer. The cement string was pulled 150 feet and reversed out. After waiting on cement for 12 hours, the mud was displaced with water, and then the water displaced with 3,925 gallons of diesel oil to 1320'. The 9-5/8"

annulus was left full of diesel from 1320' to the surface to allow future temperature measurements by U. S. Geological Survey personnel. The blowout preventers were nippled down and an abandonment marker set.

The rig was released April 15, 1980, at 11:00 p.m. Rig-down and demobilization of rental equipment began at that time and was completed on April 25, 1980.

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NOTICE OF INTENT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER Wildcat SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR: 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements*)
At surface: 1099' FSL; 1339' FEL
At proposed prod. zone: Same (straight hole)

5. LEASE DESIGNATION AND SERIAL NO.: N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: National Petroleum Reserve in AK

9. WELL NO.: Seabee Test Well No. 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 5, T15, R1W, UM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 174 miles southeast of Barrow

12. COUNTY OR PARISH: North Slope

13. STATE: Alaska

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 7920'

16. NO. OF ACRES IN LEASE: 23,680,000

17. NO. OF ACRES ASSIGNED TO THIS WELL: N/A

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 2640'

19. PROPOSED DEPTH: 15,200'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 292' Pad; 322' KB

22. APPROX. DATE WORK WILL START*: July 5, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
	30"		± 100' KB	SEE
26"	20"	133# (K-55)	± 1500' KB	DRILLING
17 1/2"	13 3/8"	72# (S-95)	± 4000' KB	PROGRAM
12 1/4"	9 5/8"	53.5# (S-95)	± 10,000' KB	FOR
8 1/2"	7"	32# (N-80)	± 15,200' TD	DETAILS AND AMOUNTS

SEE DRILLING PROGRAM FOR DETAILED DRILLING PLAN.

BOP PROGRAM

From ± 100' to ± 1500'
29 1/2", 500 psi annular diverter

From ± 1500' to 4000'
20", 3000 psi SRRA
w/5000 psi choke manifold

From ± 4000' to ± 10,000'
13 5/8", 5000 psi SRSRRA
w/5000 psi choke manifold

From ± 10,000' to ± 15,200' (TD)
11", 10,000 psi SRSRRA
w/10,000 psi choke manifold

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED Max Brewer TITLE Chief of Operations - NPRA DATE 12 June 79

(This space for Federal or State office use)

APPROVED BY [illegible] TITLE [illegible] DATE 6/27/79

CONDITIONS OF APPROVAL, IF ANY:

See attached conditions.

*See Instructions On Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope | 13. STATE: Alaska

14. API NO.
292' Pad; 322' KB

15. ELEVATIONS (SHOW DF, KDB, AND WD)

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Notice of Spud			

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This well was spudded July 1, 1979, at 2:30 PM. Hole size at spud is 17 1/2". 30" conductor was cemented in place at 115' KB with 1285 sacks Arctic Set II cement previous to spud.

RECEIVED
ONSHORE DIST. OFFICE

JUL 3 1979

CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED J. Max Brewer TITLE Chief of Operations DATE 2 JULY 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

APPROVED BY James Webb TITLE DISTRICT SUPERVISOR ACTING DATE 7/3/79

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

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4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

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Wildcat

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Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH North Slope 13. STATE Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐

(other) Subsequent Report of Running and Cementing 20" Surface Casing

RECEIVED
ONSHORE DIST. OFFICE
JUL 26 1979
(NOTE: Report results of multiple completion or zone change on Form 9–330.)
CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

A 17 1/2" hole was drilled to 1623' and logged. Opened hole to 26" to 1623'. Ran 20 joints of 20", 169#, and 24 jts of 133#, K55, 8rd, range #3. Landed with float shoe at 1617' KB and float collar at 1579'. Installed centralizers 10 feet above the shoe, second, third, and fourth collars, plus on every other collar through the fourteenth collar (total of 9 centralizers). Cemented with 3400 sacks of ArcticSet II cement at 15.2 slurry weight with a 15.1 ppg slurry weight in returns. Cement in place at 9:50 PM, July 16, 1979. Waited on cement for 40 hours. Installed National NSB 20", 3000 psi landing flange and tested weld to 250 psi. Nipped up 20", 3000 psi BOP stack, kill line, and 5000 psi choke manifold, and tested. Tested casing to 2400 psi. Drilled out float collar and float shoe. Tested formation to .598 psi/ft gradient with no leak off.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED J. Max Brewer TITLE Chief of Operations DATE 24 July 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

James Weber DISTRICT SUPERVISOR ACTING DATE 7/26/79

*See Instructions on Reverse Side

Amended 7/7/83

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

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Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope | 13. STATE: Alaska

14. API NO.

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292' Pad; 322' KB

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TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Report of Running and Cementing 13 3/8" Casing			

RECEIVED
ONSHORE DIST. OFFICE

(NOTE: Report results of multiple completion or zone change on Form 9–330.) SEP 5

CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

A 17 1/2" hole was drilled to 4009' and logged with DIL/GR/SP, FDC/CNL/GR/CAL, BHCS/GR/TTI, and Velocity Survey. Conditioned hole for running casing. Ran 103 joints 13 3/8", 72#, S-95, Buttress casing. Float shoe at 3983', float collar at 3896', lower FO at 1990', top FO at 996'. Ran one centralizer 10 feet above shoe on stop ring. Ran centralizers on collars 1, 3, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, and 25 and two centralizers above and below each FO. Total of 19 centralizers. Cemented first stage with 1600 sacks Class "G" cement with 0.75% D65 and 0.1% D13R. Preceded cement at 15.8 ppg with 50 bbls water. Followed cement with 2 bbls water and 65 bbls mud. CIP 7/27/79 at 10:10 PM. Checked floats and POH. RIH with FO shifting assembly with 30 joints HWDP. Opened bottom FO and circulated bottoms up. Closed FO. Pulled up to top FO. Cycled FO and POH. Hung off 20" BOP stack. Set 13 3/8" slips. Had problem lining up slips. Dressed bowl and slips. Reset slips with 250,000#. Cut off 13 3/8" casing. Nippled down 20" BOPE.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Chief of Operations DATE _____

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

TITLE DISTRICT SUPERVISOR DATE _____

*See Instructions on Reverse Side

Amended 7/7/83

Sundry Notice
Seabee Test Well No. 1
Subsequent Report of Running and Cementing 13 3/8" Casing
Page 2

Installed 13 3/8" packoff. Tested to 2500 psi. Nippled up 13 5/8", 5000 psi BOP stack and choke manifold. Tested all BOPE to 5000 psi except Hydril, which was tested to 2500 psi. Pick up FO shifting assembly and RIH. Open FO at 1989' and condition to cement. Pump 30 bbls water, 1450 sacks Arcticset II mixed at 15.2 ppg. Returns began with 1260 sacks pumped. Final cement return weight: 15.0 ppg. Pumped 4 1/2 BPM. Followed cement with 2 bbls water and 21 1/2 bbls mud. CIP 7/30/79 at 11:45 AM. Closed FO. Reverse out cement. WOC 12 hours. POH. Cycle top FO. Test to 2500 psi. Lay down FO shifting assembly. RIH with bit. Drill float collar and 84 feet of cement. Drill float shoe. Clean out to 4009'. Run leakoff test. Formation held 0.8 psi/ft equivalent gradient with no leak off. Resumed drilling 12 1/4" hole.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A

7. UNIT AGREEMENT NAME N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO. Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH North Slope | 13. STATE Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD) 292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Notice of Intent to Temporarily Suspend			

RECEIVED
(NOTE: Report results of multiple completion or zone change on Form 9–330.) OFFICE
SEP 5

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Due to unsettled labor dispute between Nabors Alaska, Inc., and the Roughneck and Drillers Union, the Seabee Test Well No. 1 will be placed in temporary suspension. We will log the open hole, set 13 3/8" retainer at ± 3750', and squeeze shoe with 125 sacks Arctic Set II cement. Change over the top 1000 feet of mud to diesel and run DP to ± 3650' for a kill string. Test to 2500 psi and prepare rig for shut down. Detailed procedure is attached. Verbal approval received from Mr. Rodney Smith August 18, 1979.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max V. Brewer TITLE Chief of Operations DATE 4 September 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

APPROVED BY _____ TITLE DISTRICT SUPERVISOR DATE Sept 5, 1979

*See Instructions on Reverse Side

TEMPORARY SUSPENSION PROCEDURE
SEABEE TEST WELL NO. 1

1. RIH to TD. Circulate and condition for logging.

2. Run logs as directed by Wellsite Geologist.

3. RIH to ± 3900' with 12 1/4" bit and 13 3/8", 72# scraper. Circulate and condition mud to 14.5 ppg.

4. POH. Pick up Howco EZ Drill 13 3/8", 72# retainer. Set retainer at ± 3750'.

5. Unsting from retainer. Close pipe rams and test to 2500 psi.

6. Stab into retainer and establish breakdown. Observe 2500 psi maximum pressure. Unsting from retainer.

7. Pump 20 bbls water, mix and pump 125 sacks Arctic Set II. Mix weight: 15.2 ppg. Mix water 3.5 gallons. Yield: 0.95 ft 3/sacks. Pump 2 bbls water. Displace with mud. Spot cement ± 500 feet from stinger. Stab into retainer. Squeeze formation until either 2500 psi max or 100 sacks of cement under retainer.

8. Unsting from retainer and spot remaining cement on top of retainer.

9. POH one stand. Reverse out DP. WOC 12 hours.

10. POH. Lay down retainer running tool. RIH to ± 1000' open ended. Reverse mud to water and water to diesel. (1000 feet of 13 3/8" X 5" casing will hold approximately 140 barrels diesel.)

11. Close Hydril and open choke line to flare pit. Strip in to ± 3650'. (Place inside BOP two stands from surface.) Land DP in slips. Use double valves on surface. Close pipe rams and test to 2500 psi through kill line. Release pressure and lock pipe rams.

12. Drain mud pits and prepare rig for temporary suspension.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope
13. STATE: Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Report of Temporary Well Suspension			

RECEIVED
ONSHORE DIST OFFICE
SEP 5
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Due to unsettled labor dispute between Nabors Alaska, Inc., and the Roughneck and Drillers' Union, Seabee Test Well was temporarily suspended.

The 12 1/4" hole was conditioned for logging and was logged with DIL/GR and FDC/CNL/GR. Tripped in with open ended DP to 4100' and pumped 400 sacks of Arctic Set II cement. Pulled 4 stands to 3725' and circulated out contaminated mud. Cement plug set from 4100' to 3883'. CIP at 12:00 midnight. Set a Baker retrievable bridge plug at 3635'. Tested 13 3/8" casing with RTTS set at 1005' OK. Tested below the packer with 2000 psi for 20 minutes. OK. Tested backside with 1950 psi for 20 minutes OK. Opened top FO, set RTTS and tested DP and casing annulus to 2000 psi OK. Tested formation to 2000 psi, bled to 1600 psi in 15 minutes. Could not establish an injection rate. Closed FO and tested. Tripped in to 1140', reversed mud to water to diesel. Stripped in to 3540'. Filled DP with diesel. Installed

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max Brewer TITLE Chief of Operations DATE 4 September 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

TITLE DISTRICT SUPERVISOR DATE Sept 5, 1979

*See Instructions on Reverse Side

inside BOP one stand below the table. Installed double valves on drill pipe. Set slips and closed pipe rams on BOP. Well suspended at 2:15 PM, 8/21/79.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR: National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR: 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE: N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: National Petroleum Reserve in Alaska

9. WELL NO.: Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope | 13. STATE: Alaska

14. API NO.: N/A

15. ELEVATIONS (SHOW DF, KDB AND WD): 292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Notice of Intent to Re-enter and Continue Drilling Program			

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Husky Oil NPR Operations, Inc., plans to re-enter and continue the previously approved drilling program of Seabee Test Well No. 1. The well was suspended as of 8/21/79. The procedure was discussed verbally with Mr. Barry Boudreau on 10/10/79. The work is to continue on or near 10/15/79. Detailed procedure and wellbore schematic are attached.

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ONE OF THE DIST. OFFICE
NOV 26 1979

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max Brewer TITLE Chief of Operations DATE 23 November 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

(Orig. Sgd.) Barry A. Boudreau DISTRICT SUPERVISOR DATE NOV 2[illegible]

*See Instructions on Reverse Side

DISTRICT FILE

RE-ENTRY PROGRAM
SEABEE TEST WELL NO. 1

1. After reactivating Nabors Alaska Rig 25, mix and condition mud to 14.5 ppg. Pre-treat mud for drilling cement.

2. Check drill pipe and annulus for pressure.

3. Test BOPE. Close bottom pipe rams. Test between pipe rams to 5000 psi. Test Hydril to 2500 psi. Test choke manifold to 5000 psi. Test casing to 2500 psi.

4. Pick up kelly and rig up to circulate diesel out of annulus. Circulate through choke manifold to flare pit for burning. (Approximate volume of diesel to displace is 125 bbls.) Do not exceed 2500 psi. Control rate of burning by pumping rate. Make note and log wind direction and velocity during burn. Note time displacement is started. Time diesel returns are obtained. Shut down as soon as returns are primarily mud. Switch over and begin circulating and conditioning mud through mud tanks. Be sure to clear flare and blowdown lines. Fill choke manifold with 60/40 mixture of glycol and water.

5. RIH to 3635' and retrieve Baker bridge plug. Shut down and watch for flow and circulate bottoms up before POH.

6. Test BOPE. Run test plug. Test rams and choke manifold to 5000 psi, Hydril to 2500 psi. Run wear bushing.

7. Pick up open nozzled 12 1/4" bit and slick drilling assembly. RIH and drill out cement plug. Stage into hole to 6551' and condition mud.

8. POH and pick up locked drilling assembly. Return to Drilling Program for Seabee Test Well No. 1, Section D, Step 3.

J. M. McCarthy
10/11/79

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH North Slope | 13. STATE Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Report of Re-entry			

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(NOTE: Report results of multiple completions or zone changes on Form 9–330.) NOV 26 19[illegible]

GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Husky Oil NPR Operations, Inc., reactivated Nabors Rig 25 on October 16, 1979. Mixed and conditioned mud in pits to 14.5 ppg. Tested BOPE: 2500 psi between pipe rams and Hydril. Tested choke manifold to 5000 psi; casing to 2500 psi. Circulate diesel out with mud. Burn 125 bbls diesel. Start flare at 2:10 AM, 10/17/79. Mud to surface at 2:35 AM. Fire burned out by 3:30 AM, 10/17/79. Wind: 18 knots from the Northeast direction during the burn. Pull bridge plug and drill pipe. Test BOPE: rams to 5000 psi, Hydril to 2500 psi, choke manifold to 5000 psi. Pick up bit and slick BHA. Drill cement from 3799' to 4110'. Ream and condition open hole to 6528'. Clean out 23' fill. Drilling 12 1/4" hole.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max S. Brewer TITLE Chief of Operations DATE 23 November 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

(Orig. Sgd.) Barry A. Emerson DISTRICT SUPERVISOR DATE [illegible]

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR: National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR: 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE: N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: National Petroleum Reserve in Alaska

9. WELL NO.: Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME: Wildcat

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA: Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope

13. STATE: Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD): 292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON	☐		☐
(other) Notice of Change of Plans			

RECEIVED
ONSHORE DIST. OFFICE

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

NOV 26 1979

...VISION
...L SURVEY
...E, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

An evaluation of drilling conditions at Seabee Test Well No. 1 has lead to the decision not to Arctic Pack this well at the 9 5/8" casing point. The well will be Arctic Packed at the point it becomes necessary.

Subsurface Safety Valve: Manu. and Type _____ - _____ - ___ Set @ _____ FT.

18. I hereby certify that the foregoing is true and correct

SIGNED Max S. Brewer TITLE Chief of Operations DATE 23 November 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

(Orig. Sgd.) Barry A. Boudreau DISTRICT SUPERVISOR DATE NOV 2[illegible] 1979

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope
13. STATE: Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Report of Running 9 5/8" Casing			

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 12 1/4" hole to 10,004'. Logged with DIL/SP/GR, FDC/CNL/GR, BHC/GR/TTI, HRD Dipmeter, Velocity Survey, and 24 sidewall cores, recovering 23. Ran 232 joints of 9 5/8", 53.5#, S-95 Buttress, Range 3 casing. Ran 33 centralizers; one over a stop ring 10' above the shoe, on collars numbers 1, 3, 4, and 5, and on every other collar through the 25th. Ran two centralizers on collars above and below the DV, each FO, and on every fifth collar from the top FO to surface. Float shoe @ 9976.69'. Float collar @ 9896.93'. Insert collar @ 9851.61'. DV @ 5591.75'. FOs @ 3519.22' and 2103.37'. First stage cemented with 30 bbls water and 1200 sacks of Class "G" cement with 0.75% D65 and 0.3% D13R. Displaced with 10 bbls of water and 741 bbls mud. Bumped plug with 3000 psi. CIP @ 10:20 AM, 11/24/79. Dropped opening bomb. Pressured to 1100 psi to open stage tool. No contaminated returns. Second stage cemented with 30 bbls water and 1600 sacks Class G cement with 0.75% D65. Slurry weight of 15.8 ppg. Displaced with 10 bbls water and 387 bbls mud. Bumped plug with

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max Brewer TITLE Chief of Operations DATE 7 December 79

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

(Orig. Sgd.) Barry A. Boudreau DISTRICT SUPERVISOR DATE DEC 12 1979

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ONSHORE DIST. OFFICE

*See Instructions on Reverse Side

DEC 12 1979
CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

2200 psi. Tested stage tool to 3000 psi. OK. CIP @ 11:30 PM, 11/24/79. Recovered 30 bbls of contaminated mud during cementing job. Nipple down. Set slips on 9 5/8" casing with 350,000#. Cut off landing joint. Nipple down 5000# BOP. Nipple up 11" X 10,000 psi BOP stack. Tested OK. Pick up 8 1/2" bit. Drilled cement from 9850' to 9896'. Circulate and condition mud. Pressure tested 9 5/8" casing to 1500 psi. OK. Logged with CBL/VDL/CCL/GR. Tested casing to 3000 psi. Drilled to 10,021' and tested formation to 17.68 ppg equivalent gradient; 1500 psi surface. Drilling 8 1/2" hole.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH 13. STATE
North Slope Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Notice of Intent to Change Plans			

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilling conditions at the Seabee Test Well No. 1 require that 7 5/8", 39#/ft liner be set from ± 300' lap in 9 5/8" casing to ± 13,000'. The hole will be logged prior to running and cementing casing. A copy of the liner procedure is attached.

JAN 23 1980

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Max V Brewer TITLE Chief of Operations DATE 18 January 80

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

Barry A Bondurant TITLE DISTRICT SUPERVISOR DATE 1-23-80

*See Instructions on Reverse Side

CEMENTING PROCEDURE
SEABEE TEST WELL NO. 1

1. Trip in and condition the hole for 7 5/8" liner. Run the 7 5/8" liner as follows:

   a. Set shoe - BOT type V with 7 5/8", 39#, ABFL4S threads.

   b. 1 joint 7 5/8", 39#, S-95, ABFL4S liner.

   c. Catcher sub - BOT 7 5/8", 39#, ABFL4S.

   d. 1 joint 7 5/8", 39#, S-95 ABFL4S.

   e. Landing collar - BOT type II with 2500 psi shear out, with 7 5/8", 39# ABFL4S.

   f. 7 5/8", 39#, S-95, ABFL4S liner from landing collar to a point ± 300' above the 9 5/8" shoe at 9980.

   g. Crossover bushing - BOT 7 5/8", 8RD box X 7 5/8", 39# ABFL4S pin with centralizer.

   h. Liner hanger - BOT type MC hydraulic set, 7 5/8", 8RD X 9 5/8", 53.5#.

   i. Setting sleeve - BOT 7 5/8", 8RD X 9 5/8", 53.5# setting sleeve with 6 foot tie back extension.

   j. Setting tool - BOT type C-2.

   k. Drill pipe to surface.

   Use thread locking compound on 7 bottom connections.

   Use API modifed Arctic grade thread compound on all other liner connections.

2. Run liner to T.D. Fill liner every 5 joints and drill pipe every 10 stands. Break circulation after running first stand of drill pipe, at 5000' and every 2500' below 5000', and prior to going into the open hole with the liner. Do not run liner faster than 90 ft/min.

3. When on bottom with the liner, rig up BOT cement and plug dropping manifold, circulate the capacity of the liner and drill pipe. Drop 1 3/4" OD setting ball; when ball lands on seat, pressure down drill pipe to 1800 psi; hold this psi, slack off liner weight on hanger plus 20,000# drill pipe weight, then continue psi to 2500 or until seat shears, or as directed by BOT representative.

   Rotate drill string 10 rounds to right at the hanger to disengage setting tool from liner.

4. Circulate and condition the hole for cementing. Allow sufficient time for the hole to cool while circulating.

5. Cement the 7 5/8" liner with Class "G" cement containing 1.25% D65 and 0.2% D13R. Mix weight: 17.0 ppg. Yield: 1.0 ft^3/sack. Mix water: 3.8 gal/sack. Volume to be determined from Dipmeter Caliper plus 15% excess. Precede cement with ± 40 bbls Spacer 1000 mixed at 17.0 ppg.

6. Mix and pump cement, drop the pump down plug and displace with mud. Displace at or near 4 BPM with cement unit. Watch for drill pipe wiper plug to pick up liner wiper plug and slow down to 3 BPM or less 10 bbls before wiper plug bumps into landing collar.

7. Bump plugs with 3000 psi. Do not overdisplace the calculated volume to bump the plugs by more than 10 bbls. Release pressure and check the float. (Includes 5 bbls compression and 5 bbls shoe joint safety factor.)

8. Pull liner setting tool and trip out 5 stands. If DP is pulling wet, reverse out excess cement. Limit pressure to 500 psi. If trip gas or high background gas had been a problem while drilling, continue reversing and hold pressure at 200 psi while cement sets--probably 12 hours. Use information from conditioning prior to cementing to judge the need for back pressure while cement sets.

9. WOC 24 hours.

10. Clean out to the top of the liner with an 8 1/2" bit and 9 5/8", 53.5# casing scraper.

11. POH.

12. Pick up 6 1/4" bit, the 4 3/4" collars, and required amount of 3 1/2" drill pipe to clean out to landing collar. Strap into hole. Clean out to landing collar. Check pipe tally. Circulate and condition mud. Close pipe rams and test to 3000 psi. During this test, plot volume versus pressure. If lap tests, go to negative flow lap test in Step 21.

13. If lap test fails, POH and pick up 9 5/8" EZ Drill retainer on 5" DP. RIH and set retainer ± 100' above 7 5/8" liner.

14. Pull out of retainer. Circulate and condition.

15. Cycle valve for proper operation. Unsting from retainer and test to 3000 psi. Test drill pipe to 3000 psi. Stab into retainer. Pump into lap and establish injection rate and pressure. Limit pressure to 3000 psi. If lap does not break down, close pipe rams and pressure up annulus to 1500 psi. Pump into lap and establish rate, limiting pressure to 5000 psi.

16. Pull out of retainer. Pump 30 bbls water. Mix and pump 200 sacks Class "G" cement at 17.0 ppg. Mix water 3.8 gals/sack, yield 1.0 ft 3/sack. Cement to contain 1.25% D65, 0.2% D13R. Pump 3 bbls water. Displace with mud. Spot cement to within 20 bbls of retainer.

17. Stab into retainer. Squeeze liner lap, observing 5000 psi on DP and 1500 psi on casing. Leave ± 3 bbls cement in DP. Watch the 9 5/8" X 5" annulus for any sign of a leak.

18. Pull out of retainer and spot cement on top of retainer. Pull two stands and reverse out drill pipe.

19. POH. WOC 12 hours.

20. Pick up 8 1/2" bit and 9 5/8", 53.5# scraper. RIH. Clean out to top of liner. Test lap to 3000 psi. If test fails, squeeze as directed.

21. If lap pressure test holds, run negative flow lap test as follows:

    A. Run Howco DST tools on drill pipe as follows:

        (1) Howco HT-500 temperature recorder.

        (2) Howco BT pressure recorder (BP - outside).

        (3) Howco BT pressure recorder (BP - outside).

        (4) Howco perforated anchor pipe (2 joints).

        (5) Howco 9 5/8", 53.5# hookwall packer.

        (6) Howco V-R safety joint.

        (7) Howco hydraulic jars.

        (8) Howco hydrospring tester.

        (9) Howco dual CIP valve.

        (10) Crossover to 5", 19.50 DP with 4 1/2" IF TJ.

        (11) One stand 5", 19.50 drill pipe.

        (12) Howco impact reversing sub.

        (13) 5" drill pipe to surface.

    B. Run enough mud cushion to give 2500 psi differential across 7 5/8" liner lap.

    C. Open tool three hours.

    D. Close tool three hours. If strong blow, shut in may be extended.

E. Drop bar and reverse out cushion.

F. Check pressure charts. If lap does not test, cement squeeze as in Step 14.

22. Run tapered drilling string and 6 1/4" bit. Strap into landing collar and test casing and liner to 3000 psi.

23. 6 1/4" hole to proposed TD @ ± 15,000'.

A. Check pipe tally. Drill out landing collar and set shoe. Drill 10 feet of formation. Condition mud and test formation to a .936 psi/ft equivalent gradient. Pressure up slowly 1/4 to 1/3 BPM. Plot volume versus pressure. Should leak off or rupture occur before the .936 psi/ft gradient is reached, stop pumping and record pressure decline in one-minute intervals until stable. Report results and send graphs to the Anchorage office. Open hole integrity tests may be run if required.

B. Drill a 6 1/4" hole to ± 15,000', the proposed TD. Cores and DSTs may be taken of the Fortress Mountain and Pebble Shale Sands. Pay close attention to pore pressure plots. Detailed DST procedures will be furnished as required.

C. Condition hole for logs as set out in the Logging Program and as directed by the Wellsite Geologist.

D. The decision to test, suspend with completion, or abandon the well will be made after all logs have been thoroughly evaluated. The appropriate procedures will be furnished at the time as required.

David K Reid

Amended 7/7/83

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well [X] gas well [ ] other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope 13. STATE: Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	[ ]		[ ]
FRACTURE TREAT	[ ]		[ ]
SHOOT OR ACIDIZE	[ ]		[ ]
REPAIR WELL	[ ]		[ ]
PULL OR ALTER CASING	[ ]		[ ]
MULTIPLE COMPLETE	[ ]		[ ]
CHANGE ZONES	[ ]		[ ]
ABANDON*	[ ]		[ ]
(other) Subsequent Report of Running and Cementing 7 5/8" Casing Liner			

RECEIVED
ONSHORE DIST. OFFICE

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

FEB 20 1980

CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 8 1/2" hole to 12,814'. Logged with DIL and BHC/GR. Aborted logging due to extreme danger of losing tools in tight hole. Ran 78 joints of 7 5/8", 39#, S-95, ABC-FL4S, Range 3 casing. Top of liner at 9661' and shoe at 12,814'. Cemented with a 40 bbl spacer and 896 sacks of Class G cement with 1.25% D65, 0.2% DR13 and 30 lbs per sack of Barite. Slurry weight of 18.1 ppg. CIP at 3:35 AM, 1/21/80. Tested BOPE to 10,000 psi, except for the 3 1/2" rams. Tested Hydril to 5000 psi. OK. Tested liner. 1340' psi leak off. Circulate and condition mud. Set 9 5/8" Howco E-Z Drill Retainer at 9576'. Stab in with drill pipe. Established formation breakdown at 3 BPM at 1750 psi. Pumped 15 bbls. water. Cemented with 200 sacks Class "G" cement with 1.25% D-65 and 0.2% D-13R. Pumped 3 bbls of water behind and displaced with 116 bbls of mud. Held 200 psi back pressure. Maximum surface pressure of 2000 psi. CIP at 2:46 PM, 1/24/80. Tested 3 1/2' rams to 10,000 psi. OK. Drilled retainer at 9576' and tagged cement at 9586'. Cleaned out to 9661'. Tested liner lap and casing.

Subsurface Safety Valve: Manu. and Type _____ Set @ ___ . ___ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Chief of Operations DATE _____

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

TITLE DISTRICT SUPERVISOR DATE _____

*See Instructions on Reverse Side

liner to 3000 psi. OK. Ran a negative flow test, good test. Drilled 12,832' and tested formation to a 1.04 psi gradient. Drilling ahead with a 6 1/4" bit.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

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3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M. OR BLK AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH North Slope 13. STATE Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Notice of Intent to Change Plans			

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The original Notice of Intent to Drill indicated the proposed TVD to be 15,200'. Due to thicker geologic sequences, the objective TVD is expected to be 16,000'. Verbal notification to Mr. Weber was given 3/4/80.

RECEIVED
ONSHORE OIL & GAS OFFICE
MAR 7 1980
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct
SIGNED Max Brewer TITLE Chief of Operations DATE 6 March 80

(This space for Federal or State office use)
Conforms with pertinent provisions of 30 CFR 221.
APPROVED BY James Weber ACTING DISTRICT SUPERVISOR DATE 3/7/80

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR
2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE
N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME National Petroleum Reserve in Alaska

9. WELL NO.
Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope | 13. STATE: Alaska

14. API NO.

15. ELEVATIONS SHOW DF, KDB, AND WD)
292' Pad; 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☒		☐
(other)			

RECEIVED
ONSHORE DIST. OFFICE
APR 22 1980
CONSERVATION DIVISION
U. S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This is a confirming notice of intent to abandon Seabee Test Well No. 1. This well was drilled to a total depth of 15,611', logged, and tested. As a result of the evaluation, plans were developed to abandon the well. The abandonment procedure is attached.

This plan has been discussed with and verbally approved by Mr. Jim Weber of the USGS Conservation Division, 4/3/80.

The Abandonment Head schematic is also attached.

Subsurface Safety Valve: Manu. and Type _____ Set @: _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED J. Max Brewer TITLE Chief of Operations DATE 21 April 80

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

Dwight Bankhead TITLE _____ DATE 4-23-80

*See Instructions on Reverse Side

SEABEE TEST WELL NO. 1
TEST AND ABANDONMENT PROGRAM

SECTION 1 - ABANDONMENT
TD to 6000'

SECTION 2 - TEST ZONE
5366' to 5394'

SECTION 3 - ABANDONMENT
6000' to 3000'

SECTION 4 - TEST ZONE
2652' to 2664'

SECTION 5 - ABANDONMENT
3000' to Surface

SECTION 1
ABANDONMENT - TD to 6000'

1. Trip in with open ended drill pipe to ± 14,450'.

2. Condition mud to uniform weight and viscosity for plugging.

3. Spot Plug No. 1, a 75 sack Class G plug (estimated fill 14,450' to 14,250') containing 33#/sx D-76, 1.65% D-65, 0.1% D-28, 0.2% D-46. Yield: 1.08 ft^3/sk. Mix water: 3.71 gal/sx. Thickening time: 5 hours. Mix weight: 19.5 ppg. This is a +190' plug in this section of open hole based on an estimated average hole size of 8 3/4" diameter. Spot a balanced plug with 8.4 bbls 19.0 ppg Spacer 1000 ahead of cement. Mix and pump cement. Pump 1 bbl 19.0 ppg Spacer 1000 behind cement. Displace with mud, using cement unit for a balanced plug.

4. Pull up to ± 13,800'. Condition mud.

5. Spot Plug No. 2, a 240 sack Class G plug (estimated fill 13,800' to 13,180') containing 33#/sx D-76, 1.65% D-65, 0.1% D-28, 0.2% D-46. Yield: 1.08 ft^3/sx. Mix water: 3.71 gal/sx. Thickening time: 5 hours. Mix weight: 19.5 ppg. This is a + 620' plug in this section of open hole based on an estimated average hole size of 8 3/4" diameter. Spot a balanced plug with 8.4 bbls 19.0 ppg Spacer 1000 ahead of cement. Mix and pump cement. Pump 1 bbl 19.0 ppg Spacer 1000 behind cement. Displace with mud, using cement unit for a balanced plug.

6. Pull up to ± 12,900'. Condition mud.

7. Spot Plug No. 3, a 250 sack Class G plug containing 20#/sx D-76, 1.25% D-65, 0.2% D13R, and 5#/sack Barite. Yield: 1.06 ft^3/sx. Mix water: 3.7 gal/sx. Thickening time: 4 hours. Mix weight: 19.0 ppg. This is an 86' plug in this section of open hole based on an estimated average hole size of 20" and a + 190' plug in 7 5/8" liner. Spot a balanced plug with 9.82 bbls 19.0 ppg Spacer 1000. Mix and pump cement. Pump 2 bbls 19.0 ppg Spacer 1000 behind cement. Displace with mud, using cement unit for a balanced plug.

8. Pull up to ± 9900'. Condition mud.

9. Spot Plug No. 4, a 147 sack Class G plug containing 1.65% D65, 0.1% D28, 0.2% D46 and 33#/sk D76. Yield: 1.08 ft^3/sx. Mix water: 3.71 gal/sx. Mix weight: 19.5 ppg. This is 239' of plug in 7 5/8" liner and 255' of plug in 9 5/8" casing. Pump 15.4 bbls water. Mix and pump cement. Pump 2 bbls water. Displace with mud, using cement unit for a balanced plug.

10. Pull up to ± 9000'. Reverse out drill pipe volume. POH. Lay down 3 1/2" drill pipe.

11. Pick up an 8 1/2" bit and 9 5/8", 53.5# scraper on 5" DP. Trip in to ± 8425'. Circulate and condition mud. POH.

12. Pick up a Halliburton 9 5/8", 53.5# EZ Drill cement retainer. Trip in and set at ± 8400'. Unsting, circulate and reduce mud weight to 14.5 ppg.

13. Spot Plug No. 5, a 50 sack Class G plug containing 1.25% D65, 0.2% D13R, and 30#/sx Barite. Yield: 1.2 ft^3/sx . Mix water: 4.5 gal/sx. Mix weight: 18.1 ppg. This is + 150' of plug in 9 5/8" casing. Pump 10.3 bbls water. Mix and pump cement. Pump 4 bbls water. Displace with mud, using cement unit for a balanced plug.

14. Pull up to ± 7800'. Reverse out drill pipe. POH.

SECTION 2
TEST ZONE - 5366' to 5394'

1. Run 8 1/2" bit and 9 5/8", 53.5# scraper on 5" drill pipe. Scrape from 5500' to 5250'. Condition hole for perforating. Mud weight: 14.5 ppg.

2. Rig up Schlumberger and run CBL/VDL/GR/CCL from 6000' to 1500'.

3. Rig up Schlumberger to perforate. Pick up enough lubricator to cover the maximum length of tools to be run. Chain down lubricator securely and test lubricator to 3000 psi on first run of each test.

4. If cement bond doesn't indicate adequate zone isolation, perforate, set retainer(s), squeeze, WOC, clean out, and run bond log as directed by the on-site Husky Engineer.

5. Perforate the following interval with a 4" Hyper jet casing gun at 4 shots per foot. All depths are from the CNL/FDC/GR log, Run No. 3, dated August 19, 1979. Use CBL/VDL/GR/CCL for correlation log.

Test #1 Perforation	Ft
5366' to 5394'	28'

6. Rig up NorAlco equipment.

7. Run Howco test tools as follows:

   a. HT 500 temperature recorder with maximum recording thermometer.

   b. BT pressure recorder, outside gauge, 72-hour clock, 5000 psi recorder. (Blanked off.)

   c. BT pressure recorder, outside gauge, 72-hour clock, 5000 psi recorder. (Blanked off.)

   d. ± 30' perforated tail pipe. Approximately 15' across perforation zone and 15' above perforation zone.

   e. Hookwall packer for 9 5/8", 53.5# casing. Special drift on casing: 8 1/2"

   f. V-R safety joint.

   g. Jars.

   h. BT pressure gauge, inside recorder, 72 hour clock.

   i. BT pressure gauge, inside recorder, 72 hour clock.

   j. Extension joints.

   k. Indexing hydrospring tester.

l. Dual CIP valve with sample chamber.

m. One or two stands DC (6 5/8" reg).

n. Impact reversing sub.

o. 5" DP to surface.

p. Halliburton 5000 psi test head.

q. Run 500' of water cushion.

8. Set packer ± 20' above the top perforation at ± 5350'. Check log to be sure packer does not set in a casing collar.

9. Run a modified 4 point Isochronal test as follows:

a. Initial flow: 2 hours.

b. Initial shut in: 4 hours.

c. First 4-point flow: 3 hours.

d. First 4-point shut in: 6 hours.

e. Second 4-point flow: 3 hours.

f. Second 4-point shut in: 6 hours.

g. Third 4-point flow: 3 hours.

h. Third 4-point shut in: 6 hours.

i. Fourth 4-point flow: 8 hours.

j. Fourth 4-point shut in: 16 hours.

Based on initial response, the first, second, and third shut in periods may be shortened to equal the flow period if the reservoir shows high permeability. The fourth flow and shut in will remain extended to obtain a stabilized rate as well as to possibly detect any boundaries to the reservoir. The four choke sizes will be selected during the initial flow and shut in period.

10. After fourth (final) shut in, drop bar and reverse out.

11. Wellsite Geologist to catch samples as directed.

12. At end of fourth (final) shut in period, pull tools loose and trip out. Be sure well is stable before trip. Condition mud as required.

13. POH with DST tools. Catch fluid samples at top of DST tools.

SECTION 3
ABANDONMENT - 8000' to 3000'

1. Pick up a Halliburton 9 5/8", 53.5# EZ Drill cement retainer. Strap in and set at ± 5300'. Unsting and circulate and condition mud.

2. Test casing to 3000 psi. Test drill pipe to 3000 psi.

3. Stab into retainer. Pump into formation and establish injection rate and pressure. Limit pressure to 3000 psi. If formation does not break down, close pipe rams and pressure up annulus to 1500 psi. Pump into formation and establish rate, limiting pressure to 5000 psi.

4. Mix and pump 150* sacks of Class "G" cement with 0.75% D-65 at 15.8 ppg. Yield is 1.15 ft^3/sx. Mix water: 5 gals/sack. Precede cement with 20 bbls water and follow cement with 3 bbls water.

   Displace cement to within 1000' of retainer and sting in. Hold back pressure if needed. Squeeze cement, limiting pressure to 3000 psi or 5000 psi with 1500 psi on annulus. Monitor annulus for any sign of leak.

   If injection rate was less than 1/2 BPM at 3000 psi, reduce cement volume to 100 sacks.

   Shut down, leaving ± 10 bbls of cement in drill pipe. Unsting from retainer and bleed of any annulus pressure. Spot remaining cement on top of retainer. Pull out 4 stands and reverse out drill pipe. Reduce mud weight to 9.7 ppg.

5. Trip out, laying down drill pipe. Keep ± 2800' of drill pipe for cutting casing and/or testing and reversing out.

   *If there is not 150 sacks of Class "G" cement available. Squeeze with 100 or 50 sacks Class "G" and spot 100 sx Arctic Set II on top of retainer as a balanced plug.

SECTION 4
TEST ZONE - 2652' to 2664'

1. Since the previous bond log shows the presence of cement in the 9 5/8" X 13 3/8" annulus between 2800' and surface, this test interval will be tested through the 9 5/8" and 13 3/8" casing. No attempt will be made to cut and pull the 9 5/8" casing.

2. Run 8 1/2" bit and 9 5/8", 53.5# casing scraper. Condition hole for perforating. Scrape from 2550' to 2700'. Mud weight: 9.7 ppg.

3. Rig up Schlumberger to perforate. Pick up enough lubricator to cover the maximum length of tools to be run. Chain down lubricator securely and test lubricator to 2000 psi on first run.

4. Perforate the following intervals with 4" casing gun at 4 shots per foot. All depths are from the CNL/FDC/GR log, Run No. 2, dated July 25, 1979. Use CBL/VDL/GR/CCL for correlation log.

Test No. 2 Perforations	Ft
2652' - 2664'	12'

5. Rig up NorAlco equipment.

6. Run Howco test tools as follows:

   a. HT 500 temperature recorder with maximum recording thermometer.

   b. BT 4000# pressure recorder, outside gauge, 48 hour clock.

   c. BT 3000# pressure recorder, outside gauge, 24 hour clock.

   d. ± 20' perforated tail pipe.

   e. Hook wall packer for 9 5/8", 53.5# casing, 8 1/2" special drift.

   f. V-R safety joint.

   g. Jars.

   h. BT 4000# pressure recorder, outside gauge, 48 hour clock.

   i. BT 3000# pressure recorder, outside gauge, 25 hour clock.

   j. Standard hydrospring tester.

   k. Dual CIP valve with sample chamber.

   l. One or two stands drill collars (6 5/8" reg).

   m. Impact reversing sub.

   n. 5", 19.5# drill pipe to surface.

7. Set packer ± 15' above the top perforations at ± 2640'. Check log to be sure packer does not set in a casing collar.

8. Test interval as follows:

   a. Initial flow: 1 hour.

   b. Initial shut in: 2 hours.

   c. Final flow: 6 hours.

   d. Final shut in: 12 hours.

   Final flow and shut in periods may be shortened or extended based on well response.

9. During final shut in, drop bar and reverse out. Wellsite Geologist to catch samples as directed.

10. At end of shut in period, pull tools loose and trip out. Be sure well is stable before trip. Condition mud as required.

11. Catch fluid samples at top of DST tools. Remove sample chamber and return it to Anchorage.

SECTION 5
ABANDONMENT - 3000' to Surface

1. Pick up a Halliburton 9 5/8", 53.5# EZ Drill cement retainer. Trip in and set at ± 2600'. Condition mud.

2. Unsting from retainer and test to 3000 psi. Test drill pipe to 3000 psi.

3. Stab into retainer. Pump into formation and establish injection rate and pressure. Limit pressure to 3000 psi. If formation does not break down, close pipe rams and pressure up annulus to 1500 psi. Pump into formation and establish rate, limiting pressure to 5000 psi.

4. Mix and pump 150 sacks of Arctic Set II cement, mixed to 15.2 ppg. Yield is 0.95 ft^3/sack. Mix water 3.5 gals/sack. Precede cement with 20 bbls water and follow cement with 3 bbls water.

   Displace cement to within 1000' of retainer and sting in. Squeeze cement, limiting pressure to 3000 psi or 5000 psi with 1500 psi on annulus. Monitor annulus for any sign of leak.

   If injection rate was less than 1/2 BPM at 3000 psi, reduce cement volume to 50 sacks.

   Shut down, leaving ± 10 bbls of cement in drill pipe. Unsting from retainer and bleed off any annulus pressure. Spot remaining cement on top of retainer.

5. Pull up to ± 2450'. Circulate mud. WOC 4 hours.

6. Reverse out mud with water. Reverse out water with diesel. The appropriate capacity of the 9 5/8" from 2450' to surface is 173 bbls. Trip out, laying down drill pipe. DO NOT fill casing to surface. Leave ± 25' of 9 5/8" casing empty.

7. Nipple down BOP.

8. Rig up the 4" line pipe, 11" head cover, and dry hole marker. Set the 4" line pipe ± 10' below the surface. Put a flared wireline entry guide on the bottom of the 4".

9. Release rig and rig down. Clean location.

   Information for well marker identification:

   USGS - ONPRA
   Seabee Test Well No. 1
   1099' FSL - 1339' FEL
   Sec 5, T1S, R1W, UM

Amended 7/7/83

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR: National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR: 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1099' FSL; 1339' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Same (straight hole)

5. LEASE: N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: National Petroleum Reserve in Alaska

9. WELL NO.: Seabee Test Well No. 1

10. FIELD OR WILDCAT NAME: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 5, T1S, R1W, UM

12. COUNTY OR PARISH: North Slope | 13. STATE: Alaska

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD): 292' Pad, 322' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Subsequent Report of Abandonment			

RECEIVED
ONSHORE DIST. OFFICE
APR 25 1990
(NOTE: Report results of multiple completion or zone change on Form 9–330.)
OIL & GAS OPERATIONS DIVISION
U.S. GEOLOGICAL SURVEY
ANCHORAGE, ALASKA

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 6 1/4" hole to 15,611'. Due to hole deviational problems and tool failures, the Gamma Ray was the only log obtained. Set Plug No. 1 from 14,450' to 14,250' w/ 75 sacks of Class "G" cement containing 33 lbs/sack D76, 1.65% D65, 0.1% D28, and 0.2% D46. Slurry weight at 19.5 ppg. Plug No. 2, 13,787' to 13,180', was cemented with 240 sacks of Class "G" containing 33 lbs/sack D76, 1.65% D65, 0.1% D28, and 0.2% D46. Slurry weight at 19.5 ppg. Spotted Plug No. 3, 12,913' to 12,637' w/250 sack Class "G" cement containing 20 lb/sack D76, 1.25% D-65, 0.2% D13R, and 5 lbs/sack Barite. Slurry weight at 19.0 ppg. Cemented Plug No. 4, 9910' to 9416', w/147 sacks of Class "G" cement containing 33 lbs/sack D76, 1.65% D65, 0.1% D28, and 0.2% D46. Slurry weight at 19.5 ppg. Set retainer at 8401'. Spotted 50 sacks of Class "G" cement containing 1.25% D65, 0.2% D65, 0.2% D13R, and 30 lbs/sack Barite. Slurry weight at 19.1 ppg. Top of plug at 8251'. Tested zone from 5366' to 5394'. Set

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Chief of Operations DATE _____

(This space for Federal or State office use)

Conforms with pertinent provisions of 30 CFR 221.

TITLE _____ DATE _____

*See Instructions on Reverse Side

Amended 7/7/83

retainer at 5295'. Squeezed perforations with 150 sacks of Class "G" cement containing 0.75% D65. Slurry weight at 9.7 ppg. Injection rate at 4 1/2 BPM at 1500 psi. Cement squeezed at 3 BPM at 1750 psi. Tested zone from 2652' to 2664'. Set retainer at 2506'. Squeezed perforations with 150 sacks of Class "G" cement and spotted 10 bbls on top of retainer. Perforated 4 shots at 1500'. Set retainer at 1478'. Squeezed with 453 sacks of Arctic Set at 15.2 ppg. Lost circulation, therefore an additional 320 sacks of Arctic Set were pumped. Left 10 bbls on top of retainer. Displaced mud to water and water to diesel. Rig released 4/15/80, at 11:00 PM.

Amended 7/7/83

Form 9-330 (Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved. Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: N/A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: National Petroleum Reserve in AK

9. WELL NO.: Seabee Test Well No. 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec 5, T1S, R1W, UM

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other Wildcat

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☒ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: National Petroleum Reserve in Alaska (through Husky Oil NPR Operations, Inc.)

3. ADDRESS OF OPERATOR: 2525 C Street, Suite 400, Anchorage, AK 99503

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1099' FSL; 1339' FEL
At top prod. interval reported below
At total depth: 902' FSL; 1148' FEL

14. PERMIT NO.: N/A — DATE ISSUED: N/A

12. COUNTY OR PARISH: North Slope — 13. STATE: Alaska

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
7/1/79	3/15/80	N/A	Pad 292'; KB 322'	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
15,611'	1478'	N/A	→	All	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL, BHC/GR, GR, FDC/CNL/GR, Velocity Survey

27. WAS WELL CORED: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
30"	110.22	115'	36"	1285 Sx Arctic Set II	None
20"	119 (K55)	1617'	26"	3400 Sx Arctic Set II	None
13 3/8"	72 (S95)	3983'	17 1/2"	1600 Sx Arctic Set II	None
9 5/8"	53.5 (S95)	9980'	12 1/4"	1200 Sx Cl G w/1.25% & 0.2% D13	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
7 5/8"	9661'	12,814'	896	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A		

31. PERFORATION RECORD (Interval, size and number)
5366-5394' - 4 Shots Per Ft
2652-2664' - 4 Shots Per Ft

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
9661'	200 Sx Cl G Cmt w/1.25% D65 and 0.2% D13

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
N/A	Two DSTs	Plugged & Abandoned

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
4/8/80	64/14 Hrs	229/ 1/64 4			6.2/TSTM		

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
2100 psi/130 psi	N/A			6.2/TSTM		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Vented

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: Wellbore Schematic

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED _____ TITLE Chief of Operations DATE _____

*(See Instructions and Spaces for Additional Data on Reverse Side)

AREA FILE

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "*Sacks Cement*": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	DIL Depths MEAS. DEPTH	TOP TRUE VERT. DEPTH
SEE ATTACHED FOR SUMMARY OF CORES AND DSTs				Nanushuk Gp	Surface	
				Torok Sh	3405'	
				Fortress Mt	7644'	
				Gr/"Pebble Sh"	13,005'	

Amended 7/7/83

U.S. GOVERNMENT PRINTING OFFICE: 1982—O-361-836

871-233

Well Completion Report
National Petroleum Reserve in Alaska
Seabee Test Well No. 1

SUMMARY OF DRILL STEM TESTS

TEST NO.	FORMATION	INTERVAL	DESCRIPTION
1	Torok	5340-5388'	Open Hole DST: Packers failed immediately upon initial open.
2	Torok	5310-5402'	Open Hole DST: Packers failed in 3.5 minutes of initial open. IHP: 4082 psi. With tool open and well shut in at surface, recorded 1525 psi at surface.
3	Torok	5366-5394'	Cased Hole DST, 500' water cushion, perforated 9 5/8" casing with 4 shots/ft. Gauge at 5375.6'. Halliburton Services office computed pressures. 1st FP (231 Min): IHP 4103 psi, opened tool with fair blow, GTS in 4 minutes, flowed well through 12/64" choke at 2.1 MMCFPD with 2600 psi surface flowing pressure (SFP). Changed choke to 16/64" with 3.2 MMCFPD and 2200 psi SFP. 1st FP pressure: 1647-2644 psi, shut in well for 242 minutes. 1st SIP: 3640 psi. 2nd FP (234 Min): Opened through 6/64" choke at 0.5 MMCFPD and 2800-2900 psi SFP, 2nd FP pressure 2206-3605 psi. SI for 362 minutes, 2nd SI pressure 3638 psi. 3rd FP (179 Min): Opened through 8/64" choke at 0.95 MMCFPD and 2600-2700 psi SFP. 3rd FP pressure 1904-3543 psi, SI for 365 minutes, 3rd SI pressure 3630 psi. 4th FP (178 Min): Opened through 17/64" choke at 4.0 MMCFPD and 2500 psi SFP, increasing to 4.5 MMCFPD and 2600 psi SFP. 4th FP pressure 1953-3272 psi, SI for 362 minutes, 4th SI pressure: 3617 psi.

Amended 7/7/83

Well Completion Report
National Petroleum Reserve in Alaska
Seabee Test Well No. 1
Summary of Drill Stem Tests - Page 2

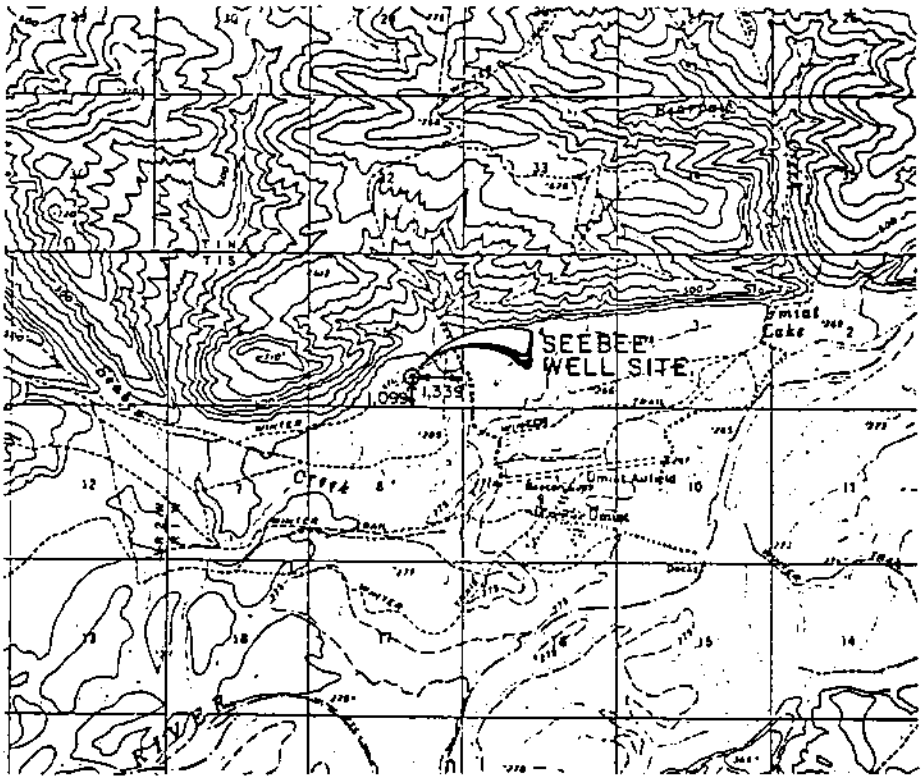
			5th FP (478 Min): Opened through 23/64" choke at 6.7 MMCFPD (dry gas) and 2250 psi SFP. After 5 hours, rate declined to 6.2 MMCFPD and 2100 psi SFP. 5th FP pressure: 1970-2777 psi; SI for 964 minutes, 5th (final) SI pressure: 3568 psi; FHP. 3937 psi. Chokes washed out, had to be recalibrated. No fluid recovered from tools or sample chamber.
4	Nanushuk	2652 - 2664'	Cased Hole DST, no cushion, perforated 9 5/8" casing and 13 3/8" casing with 4 shots/ft; Gauge at 2662 64', Halliburton office computed pressures. 1st FP (60 Min): Opened tool through 1/4" choke with immediate strong blow, GTS in 9 minutes TSTM; maximum SFP 50 psi. IHP 1335 psi, 1st FP pressure: 132-124 psi; SI for 120 minutes; 1st SI pressure: 1267 psi. 2nd FP (180 Min): Opened tool through 1/4" choke with 100 psi SFP, decreasing to 5 psi in approximately 2 hours; 2nd FP pressure: 148-126 psi; SI for 375 minutes; FSIP: 1591 psi. No fluid recovery; FHP 1445 psi.

Amended 7/7/83

SUMMARY OF CORES

CORE NO.	FORMATION	INTERVAL	DESCRIPTION
1	Torok	5390-5402' (Rec 12')	Sandstone and Shale: interbedded in 3" to 6" beds, highly fractured and brecciated, nil porosity, traces of tarry residue on fractured surfaces.
2	Torok	6541-6551' (Rec 7.3')	Shale: slightly silty and carbonaceous, no indication of hydrocarbons.
3	Fortress Mt.	10,068-10,098' (Rec 29.5')	Shale: with thin siltstone interlaminations. No indication of hydrocarbons.
4	Fortress Mt.	10,870-10,884' (Rec 14')	Shale: with carbonaceous fragments and occasional bentonite. Apparent bedding at 20°. No indication of hydrocarbons.
5	Fortress Mt.	12,011-12,041' (Rec 30')	Shale and Sandstone: interbedded and interlaminated, sandstone occasionally grades to siltstone, very carbonaceous, no indication of hydrocarbons.
6	"Pebble Shale"	13,207-13,236.6' (Rec 27.6')	Sandstone and Siltstone with thin shale laminations, nil to very poor porosity, traces of residual oil in sandstone.
7	"Pebble Shale"	14,577-14,607' (Rec 27')	Shale: black and organic, with regular "laminations" of pyrite, no indication of hydrocarbons.

Amended 7/7/83



CERTIFICATE OF SURVEYOR

I hereby certify that I am properly registered and licensed to practice land surveying in the State of Alaska and that this plat represents a location survey made by me or under my supervision, and that all dimensions and other details are correct.

SEPT. 27, 1978

STATE OF ALASKA
JOHN L. HERRING
No. 953-S
REGISTERED PROFESSIONAL LAND SURVEYOR

SEABEE

LAT. = 69° 22' 48.519"
LONG. = 152° 10' 31.291"
Y = 5,626,140.68
X = 735,330.26
ZONE 5

SCALE: 1 Mile

AS STAKED

SEABEE 2-79

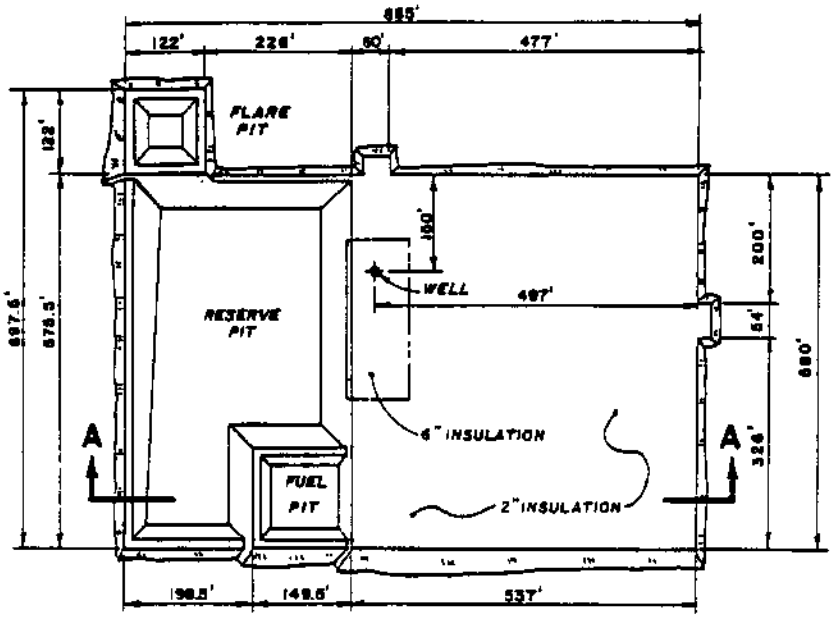
SE 1/4 PROTRACTED SEC. 5 T 11 S, R 1 W, UMIAT MERIDIAN, AK.

Surveyed for

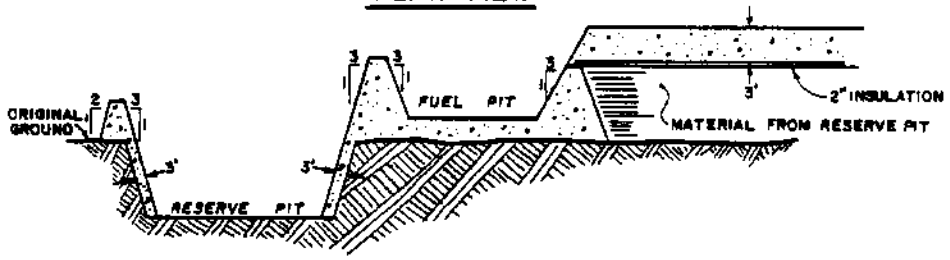
HUSKY OIL
N. P. R. OPERATIONS INC.

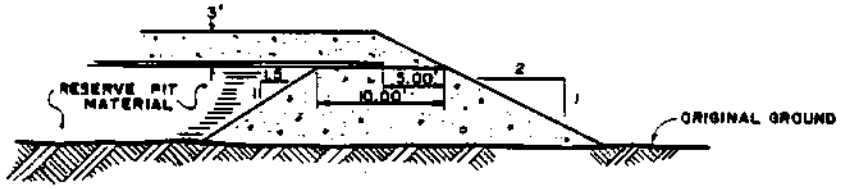
Surveyed by

Bell, Herring and Associates
ENGINEERS AND LAND SURVEYORS
801 West Fireweed, Suite 102
ANCHORAGE, ALASKA 99503



PLAN VIEW





SECTION A — A

SEABEE DRILL PAD

OPERATIONS HISTORY

DATE AND FOOTAGE DRILLED AS OF 6:00 A.M.	ACTIVITY
7/1/79	Completed general rig-up. Reset Swaco units; reset mouse hole. Cut 30" casing and set at 115'.
7/2/79 221'	Total Depth: 336'; Mud Weight: 8.9; Viscosity: 41. Nippled up 30" Hydril. Spudded well July 1, 1979, at 2:30 p.m. Surveyed; pulled out of hole for bottom-hole assembly. Ran in hole; drilled ahead.
7/3/79 472'	TD: 808'; MW: 9.4; Vis: 45. Drilled, surveyed; picked up drill collars. Drilled; surveyed; drilled ahead.
7/4/79 307'	TD: 1115'; MW: 9.6; Vis: 40. Drilled; surveyed; drilled; surveyed. Pulled out of hole; hole tight. Picked up three-point reamer; ran in hole. Drilled ahead.
7/5/79 346'	TD: 1461'; MW: 9.6; Vis: 60. Drilled; serviced rig; drilled. Surveyed. Pulled out of hole; changed bit. Ran in hole; drilled ahead.
7/6/79 162'	TD: 1623'; MW: 9.7; Vis: 82. Drilled to 1623'; circulated; surveyed. Pulled out of hole; hole tight. Ran back to bottom. Pulled out of hole and rigged up to log. Ran DIL/GR, FDC/CNL, BHCS, and HDT. Laid down bottom-hole assembly.
7/7/79 0'	TD: 1623'; MW: 9.4; Vis: 41. Began opening 17-1/2" hole to 26".
7/8/79 0'	TD: 1623'; MW: 9.5; Vis: 50. Continued opening 17-1/2" hole to 26". Pulled out of hole for new hole opener. Ran in hole; reamed to 972'. Pulled out of hole, looking for hole in drill pipe.
7/9/79 0'	TD: 1623'; MW: 9.4; Vis: 70. Picked up new set of jars; changed hole opener and pilot bit. Ran in hole; reamed 100 feet out-of-gauge hole. Continued opening hole to 26".
7/10/79 0'	TD: 1623'; MW: 9.4; Vis: 81. Changed cutters in hole opener. Ran in hole; cleaned out bridge, 920' to 1050'. Continued opening hole to 26".
7/11/79 0'	TD: 1623'; MW: 9.4; Vis: 80. Opened hole to 1388'. Pulled out of hole; dressed hole opener. Reamed 12 feet to bottom. Changed swivel packing. Continued opening hole.

7/12/79
0'

TD: 1623'; MW: 9.5; Vis: 82. Opened hole to 1587'; tripped for new cutters. Opened hole to 1623'; circulated and conditioned mud. Pulled out of hole; cleaned hole opener. Picked up 18 joints of Grade "E" pipe. Circulated bottoms up; pulled out of hole, steel-line measuring.

7/13/79
0'

TD: 1623'; MW: 9.5; Vis: 78. Finished tripping out. Laid down 26" hole opener. Rigged up to run 20" casing. Ran two joints of casing, float, and shoe. Repaired power tongs. Ran 50 joints of casing. Rigged down casing tools. Picked up stab-in mandrel. Ran in hole with 5" drill pipe. Began filling casing.

7/14/79
0'

TD: 1623'; MW: 9.5; Vis: 75. Casing parted two joints down from kelly bushing. Pulled 5" drill pipe. Rigged down Dowell unit. Pulled out two joints of 20" casing. Picked up three joints of 20" casing. Ran in hole to top of fish; could not screw into fish. Waited on 20" spear. Received 20" spear; made up fishing assembly. Ran in hole; speared fish. Picked up 225,000 pounds. Pulled up to kelly bushing; backed off spear and laid down. Prepared to pull out of hole with 20" casing. Pulled out of hole; laid down 20" casing.

7/15/79
0'

TD: 1623'; MW: 9.5; Vis: 68. Pulled out of hole, laying down 20" casing. Rigged down casing tools. Made up 26" bit; ran in hole. Drilled on junk. Circulated two hours; pulled out of hole. Rigged up to run 20" casing. Ran casing; welded all 169-pound casing tops and bottoms, plus shoe and float collar.

7/16/79
0'

TD: 1623'; MW: 9.5; Vis: 55. Ran 20 joints of 169-pound and 24 joints of 133-pound, 20" casing. Set casing at 1617' KB; set float collar at 1579'. Made up Howco tools and ran in hole to float collar. Stabbed in and circulated 900 barrels of mud. Pumped 20 barrels of water and 566 barrels of ArcticSet II cement at 15.2 ppg. Started cement at 6:35 p.m.; cement in place at 9:50 p.m. Followed cement with two barrels of water. Cement displaced at 10:00 p.m. Had full returns, three to six barrels per minute, at 15.1 ppg. Used 3,400 sacks of cement.

7/17/79
0'

TD: 1623'; MW: 9.5; Vis: 56. Waited on cement. Prepared drilling nipple and prepared to

	nipple up. Cleaned yard; sorted casing and prepared to ship. Worked on Dowell tanks and airstrip; cleaned shaker tank. Put new screens on shakers. Changed oil in torque converters. Pulled and repaired rotary shaft. Changed out fast-line sheave. Slipped and cut drilling line. Cemented in 30" x 20" annulus at 12'.
7/18/79 0'	TD: 1623'; MW: 9.5; Vis: 52. Waited on cement. Cut off casing at 10:00 p.m. Dressed 20" stub; welded on 20" wellhead. Tested weld; leaked at 100 psi. Cut out and rewelded; tested weld to 500 psi. Cemented cellar with 32 barrels of ArcticSet II at 15.3 ppg. Nippled up blowout-preventer equipment.
7/19/79 57'	TD: 1680'; MW: 9.3; Vis: 45. Completed nippling up; tested blowout-preventer equipment, kill line, and choke manifold to 3,000 psi. Tested Hydril to 1,500 psi. Picked up bottom-hole assembly; ran in hole. Tagged cement at 1552'. Drilled cement and float collar to top of shoe. Tested casing to 2,400 psi. Drilled on junk. Drilled to 1641'; tested formation to 11.5 ppg, 250 psi. Drilled to 1680'. Pulled out of hole for bottom-hole assembly.
7/20/79 368'	TD: 2048'; MW: 9.4; Vis: 60. Pulled out of hole; changed bottom-hole assembly. Cleaned junk basket; ran in hole. Drilled to 1808'; surveyed. Drilled; replaced lower kelly cock.
7/21/79 417'	TD: 2465'; MW: 9.4; Vis: 50. Drilled to 2148'; circulated samples. Drilled ahead.
7/22/79 383'	TD: 2848'; MW: 9.7; Vis: 50. Finished pulling out of hole. Moved jars in string; picked up lead collar. Ran in hole; drilled bridge at 1678'. Ran in hole; reamed 87 feet to bottom. Drilled to 2584'; circulated samples. Drilled to 2621'; circulated samples. Drilled to 2642'; had drilling break to 2661'. Drilled to 2848'. Pulled out of hole.
7/23/79 502'	TD: 3350'; MW: 9.7; Vis: 74. Ran in hole; reamed 58 feet to bottom. Drilled to 3321'. Short tripped eight stands; tight at 2840'. Ran in hole; bridge at 3068'. Drilled ahead.
7/24/79 400'	TD: 3750'; MW: 9.8; Vis: 51. Finished short trip; drilled to 3409'. Circulated samples. Drilled to 3750'.
7/25/79 238'	TD: 3988'; MW: 10.0; Vis: 65. Tripped. Ran in hole; bridges at 3250' and 3685'. Reamed from 3685' to 3750'. Drilled ahead.

7/26/79 21'	TD: 4009'; MW: 10.1; Vis: 85. Drilled to 4009'; conditioned hole. Tripped out of shoe; had 30 feet of fill on the bottom. Conditioned hole. Short tripped; no fill. Conditioned to log. Pulled out of hole, steel-line measuring. Rigged up and began logging.
7/27/79 0'	TD: 4009'; MW: 10.1; Vis: 93. Ran DIL/GR/SP, BHCS/GR/Cal, FDC/CNL/GR, HDT and Velocity Survey. Rigged down logging unit. Ran in hole; cut line. Ran in hole; had 12 feet of fill. Conditioned mud; pulled out of hole. Laid down 17-1/2" tools. Pulled wear bushing; changed rams. Rigged up and began running 13-3/8" casing.
7/28/79 0'	TD: 4009'; MW: 10.1; Vis: 80. Ran 103 joints of 13-3/8", 72#, S-95 Buttress casing and set at 3983'. Tripped in to duplex collar with stinger and closing fingers. Had indication through FOS. Circulated three-fourths hour through stab-in. Pumped 50 barrels of water; cemented with 1,600 sacks Class "G" cement with 0.75% D-65 and 0.1% D-13R. Followed with two barrels of water and 65 barrels of mud. Cement in place at 10:10 p.m. Unstung floats; pulled out of hole. Ran in hole with Howco shifting assembly on 30 joints of heavy-weight drill pipe. Ran in hole; bottom FO at 1989.86'; top FO at 996.02'.
7/29/79 0'	TD: 4009'; MW: 10.1; Vis: 55. Opened bottom FO; circulated bottoms up; closed FO. Pulled out of hole to top FO; cycled FO. Pulled out of hole; hung 20" stack. Set 13-3/8" slips with 250,000 pounds. Cut off 13-3/8" casing. Nippled down blowout-preventer equipment; installed 13-3/8" pack off.
7/30/79 0'	TD: 4009'; MW: 10.1; Vis: 50. Installed 13-3/8" pack-off. Tested to 2,500 psi. Nippled up blowout-preventer equipment and manifold and tested to 5,000 psi. Tested Hydril to 2,500 psi. Picked up Howco FO shifting tools.
7/31/79 0'	TD: 4009'; MW: 10; Vis: 41. Ran in hole; conditioned to cement. Set RTTS packer and cemented through FO at 1989' with 30 barrels water and 1,450 sacks ArcticSet II at 15.2 ppg slurry. Had returns at 1,260 sacks. Returns weight: 15.0 ppg. Final pump pressure: 1,000 psi. Pump rate: 4.5 BPM. Followed with two barrels water and 21-1/2 barrels mud. Cement in place 7/30/79 at 11:45 a.m. Closed FO; reversed out cement. Waited on cement. Pulled out of hole; opened and closed top FO. Tested to 2,500 psi. Pulled out of hole; laid down FO shifting tools. Ran in hole with bit.

8/1/79 247'	TD: 4256'; MW: 9.9; Vis: 47. Drilled float collar, 84 feet of cement, and float shoe. Cleaned out to 4009'. Ran leak-off test. Formation held 0.8 psi/ft. equivalent gradient. Drilled; surveyed; drilled.
8/2/79 194'	TD: 4450'; MW: 10.1; Vis: 47. Surveyed; pulled out of hole. Laid down 45 joints of Grade E drill pipe. Attempted to change sleeves on stabilizers. Installed wear bushing. Changed bottom-hole assembly. Steel-line measured. Ran in hole; reamed 4160' to 4287'. Drilled ahead.
8/3/79 226'	TD: 4676'; MW: 10.4; Vis: 43. Drilled; circulated samples at 4633'. Drilled; lost 500 psi pump pressure. Dropped pill; pulled out of hole. Made up new bit; ran in hole. Bit sub parted; dropped bit, roller reamer, lead collar, roller reamer, and bit sub. Picked up overshot; attempted to recover fish. Pulled out of hole.
8/4/79 319'	TD: 4995'; MW: 10.3; Vis: 47. Ran in hole with Bowen overshot; fished. Pulled out of hole; recovered fish. Changed and checked bottom-hole assembly. Ran in hole; found washout in cross-overs between drill collars and drill pipe. Ran in hole. Changed five joints of bent drill pipe. Ran in hole; drilled ahead.
8/5/79 393'	TD: 5388'; MW: 13.3; Vis: 48. Drilled; surveyed; drilled. Circulated samples at 5368'; drilled. Circulated samples at 5378'; drilled to 5388'. Picked up to circulate; well began flowing. Shut in drill pipe; pressure at 800 psi. Began pumping; opened choke; turned well through burn line. Received mud and gas. Turned to gas buster. Mud weight: 12.2 ppg; mud volume: low. Shut in to mix mud; built weight to 13.8 ppg.
8/6/79 0'	TD: 5388'; MW: 14.3; Vis: 48. Circulated through choke. Well under control at 11:30 a.m., with 13.8 ppg mud. Circulated hole; built mud to 14 ppg. Put well back on choke. Built mud weight to 14.3 ppg. Short tripped; circulated bottoms up with 3,150 units of gas to surface. Cut mud to 11.9 ppg; circulated; maintained mud weight at 14.3 ppg. Short tripped; circulated.
8/7/79 0'	TD: 5388'; MW: 14.5; Vis: 60. Circulated; short tripped; circulated. Pulled out of hole for Drill-Stem Test No. 1. Picked up drill-stem test tools and ran in hole. Filled each stand with water. Set packers at 5340' and 5326'. Packers failed; reversed out water cushion.

8/8/79 14'	TD: 5402'; MW: 14.5; Vis: 58. Reversed out water cushion; circulation valve plugged. Circulated down drill pipe with 700 psi; reversed out. Pulled out of hole; laid down Howco tools. Ran in hole; circulated bottoms up. Cut mud to 11.8 ppg. Drilled two feet; circulated bottoms up. Mud weight: 13.9 ppg with 314 units of gas. Pulled out of hole; tested blowout-preventer equipment. Picked up core barrel. Ran in hole; cut Core No. 1, 5390' to 5402'. Core barrel jammed; began pulling out of hole.
8/9/79 0'	TD: 5402'; MW: 14.5; Vis: 54. Pulled out of hole with core barrel; recovered 12-foot core. Ran in hole; reamed core hole. Pulled out of hole; picked up drill-stem test tools. Ran in hole for Drill-Stem Test No. 2, 5310' to 5402'; filled with water to surface. Opened test tool at 11:45 p.m. Set packers at 5310' and 5299'. Opened on 1/4" choke with initial open pressure of 1,500 psi. At 11:55 p.m., pressure dropped to 340 psi; at 11:58 p.m., packer failed. Unseated test tool; displaced water cushion; reversed out. Recovered some gas. Put well on degasser; circulated. Cut mud to 13.7 ppg with 4,745 units of gas. Shut well in; circulated with 14.6 returns. Slowly pulled out of hole.
8/10/79 182'	TD: 5584'; MW: 14.6; Vis: 62. Pulled out of hole with drill-stem test tool. Ran in hole with drilling string. Cleaned to bottom, 5379' to 5402'. Circulated bottoms up; cut mud to 11.7 ppg with 3,150 units of gas. Drilled ahead.
8/11/79 259'	TD: 5843'; MW: 14.5; Vis: 51. Drilled to 5678'; surveyed. Drilled to 5709'; surveyed. Drilled ahead.
8/12/79 161'	TD: 6004'; MW: 14.5; Vis: 56. Drilled to 5864'; short tripped to shoe. Set out iron roughneck; shortened rotary chain. Cleaned 23 feet of fill; drilled to 5925'; surveyed. Pulled out of hole. Ran in hole; cleaned 40 feet to bottom. Drilled ahead.
8/13/79 281'	TD: 6285'; MW: 14.5; Vis: 48. Drilled ahead.
8/14/79 109'	TD: 6394'; MW; 14.5; Vis: 47. Drilled to 6345'; surveyed. Pulled out of hole; tested blowout-preventer equipment. Cut drilling line; ran in hole to 6300'; washed 43 feet to bottom. Drilled ahead.
8/15/79 147'	TD: 6541'; MW: 14.5; Vis: 50. Drilled to 6541'; surveyed. Pulled out of hole; picked up core barrel.

8/16/79 10'	TD: 6551'. Circulated at 3931' while waiting on instructions. Ran in hole with core barrel; washed and reamed from 6510' to 6541'. Cut Core No. 2, 6541' to 6551'. Pulled out of hole; laid down core. Recovered 7.3-foot core. Laid down core barrel. Ran in hole with bottom-hole assembly to 3931'; circulated.
8/17/79 0'	TD: 6551'; MW: 14.5; Vis: 46. Circulated at 3921' while waiting on instructions in regard to lockout of drilling crew.
8/18/79 0'	TD: 6551'; MW: 14.5; Vis: 44. Continued circulating.
8/19/79 0'	TD: 6551'; MW: 14.5; Vis: 47. Continued circulating until 12:00 noon while waiting on instructions. Tripped in with bottom-hole assembly and cleaned out to bottom. Bottoms up gas: 380 units. Reamed out core hole to 6548'; circulated and conditioned for logs. Short tripped; circulated bottoms up. Pulled out of hole; rigged up to log. Ran DIL/GR/SP and began running FDC/CNL/GR/CAL.
8/20/79 0'	TD: 6551'; MW: 14.4; Vis: 45. Finished logging. Ran in hole with 13-3/8" scraper. Scraper hung up at FO at 999'. FO opened while working scraper free. Circulated and conditioned mud. Pulled out of hole; scraper hung up on wear bushing in wellhead. Wear ring hung up in bottom blowout preventer; Howco FO tools would not pass. Tripped in with open-ended drill pipe to 4100'; circulated and conditioned mud. Mixed and pumped 400 sacks of cement at 15.2 ppg. Preceded cement with 10 barrels of water and followed with one barrel water. Displaced cement with 58 barrels of mud. Pulled four stands to 3725'. Circulated out contaminated mud. Set plug from 4100' to 3883'. Cement in place at 12:00 midnight; waited on cement.
8/21/79 0'	TD: 6551'; MW: 14.4; Vis: 45. Continued waiting on cement. Pulled out of hole; circulated at 1007'. Pulled out of hole; retrieved wear ring. Ran in hole with 13-3/8" casing scraper; circulated at 967'. Ran in hole to bottom FO; circulated at 1957'. Ran in hole to 3781'; circulated bottoms up. Pulled out of hole; picked up Baker retrievable bridge plug. Ran in hole to 3635'; set bridge plug. Pulled out of hole; picked up RTTS and shifting assembly. Ran in hole; tested 13-3/8" casing with RTTS set at 1005'. Tested below packer with 2,000 psi for 20 minutes. Tested backside with 1,950 psi for 20 minutes. Both tests were good. Released RTTS; opened FO. Pulled out of hole to 982'. Set RTTS.

8/22/79 0'	TD: 6551'. Opened top FO; set RTTS; tested drill pipe and casing annulus to 2,000 psi. Tested formation to 2,000 psi; bled to 1,600 psi in 15 minutes. Could not establish injection rate. Closed FO and tested. Pulled out of hole and laid down tools. Picked up bridge-plug retrieving tool. Ran in hole to 1140'; reversed mud to water to diesel. Stripped in to 3540'. Filled drill pipe with diesel. Installed inside blowout preventer one stand below table. Installed double valves on drill pipe. Set slips and closed pipe rams on blowout preventer. Suspended well August 21, 1979, at 2:15 p.m.
8/23/79 through 10/15/79	TD: 6551'; PBTD: 3635'. Well suspended.
10/16/79 0'	TD: 6551'; PBTD: 3635'. Began rigging up and mixing mud in preparation for resuming drilling operations.
10/17/79 0'	TD: 6551'; PBTD: 3635'. Tested blowout preventer; tested 13-3/8" casing to 2,500 psi. Displaced diesel with mud. Burned diesel in burn pit. Circulated and conditioned mud at 3625'.
10/18/79 0'	TD: 6551'; PBTD: 3635'. Circulated and conditioned at 3565'. Stung into Baker packer; circulated bottoms up. Pulled out of hole with packer. Tested blowout-preventer equipment.
10/19/79 0'	TD: 6551'. Tested blowout-preventer equipment. Picked up bottom-hole assembly; ran in hole. Top of cement at 3799'. Drilled cement at 4017'.
10/20/79 0'	TD: 6551'; MW: 14.3; Vis: 130. Drilled to 4069'; bit balled up. Tripped for bit; ran in hole to 4061'. Drilled cement to 4110'; went into open hole. Ran in hole to 5560'; mud cut to 7.8 ppg on bottoms up. Circulated and conditioned mud.
10/21/79 10'	TD: 6561'; MW: 14.5; Vis: 49. Circulated and conditioned mud at 5560'. Ran in hole to 5983'; circulated bottoms up. Ran in hole to 6528'; cleaned out 23 feet of fill to bottom. Drilled six feet; bit balled up. Pulled out of hole. Ran in hole; bridge at 4073' to 4100'. Reamed 6540' to 6557'; drilled ahead.
10/22/79 171'	TD: 6732'; MW: 14.5; Vis: 46. Drilled; serviced rig; drilled.

10/23/79 120'	TD: 6852'; MW: 14.5; Vis: 52. Drilled to 6852'; surveyed; pulled out of hole. Ran in hole; cleaned out to bottom. Had 50 feet of fill.
10/24/79 106'	TD: 6958'; MW: 14.6; Vis: 52. Drilled to 6868'; surveyed. Pulled out of hole; changed bits. Ran in hole to 6852'; cleaned fill to 6868'. Drilled ahead.
10/25/79 158'	TD: 7116'; MW: 14.6; Vis: 50. Drilled ahead.
10/26/79 65'	TD: 7181'; MW: 14.5; Vis: 45. Drilled to 7166'; surveyed. Pulled out of hole; tested blowout-preventer equipment. Ran in hole to 7140'; reamed to 7166'. Drilled ahead.
10/27/79 111'	TD: 7292'; MW: 14.5; Vis: 47. Drilled to 7292'; surveyed. Pulled out of hole.
10/28/79 129'	TD: 7421'; MW: 14.5; Vis: 47. Finished pulling out of hole. Ran in hole to 7277'; cleaned to bottom. Drilled ahead.
10/29/79 190'	TD: 7611'; MW: 14.5; Vis: 48. Drilled ahead.
10/30/79 98'	TD: 7709'; MW: 14.6; Vis: 50. Drilled to 7660'; surveyed. Tripped for bit. Ran in hole to 7625'; cleaned out 35 feet of fill. Drilled ahead.
10/31/79 201'	TD: 7910'; MW: 14.6; Vis: 47. Drilled ahead.
11/1/79 100'	TD: 8010'; MW: 14.6; Vis: 48. Drilled; surveyed; tripped for bit. Ran in hole; drilled out bridge at 7870'. Reamed to bottom; drilled ahead.
11/2/79 145'	TD: 8155'; MW: 14.6; Vis: 49. Drilled; surveyed. Pulled out of hole.
11/3/79 157'	TD: 8312'; MW: 14.5; Vis: 45. Pulled out of hole; tested blowout-preventer equipment. Ran in hole; drilled ahead.
11/4/79 113'	TD: 8425'; MW: 14.6; Vis: 48. Drilled; surveyed; pulled out of hole. Ran in hole; had 17 feet of fill. Drilled ahead.
11/5/79 153'	TD: 8578'; MW: 14.5; Vis: 46. Drilled ahead.

11/6/79 33'	TD: 8611'; MW: 14.5; Vis: 46. Pulled out of hole; installed new cutters in roller reamer. Ran in hole; cleaned out 25 feet of fill. Drilled ahead.
11/7/79 108'	TD: 8719'; MW: 14.5; Vis: 46. Drilled; surveyed. Pulled out of hole.
11/8/79 96'	TD: 8815'; MW: 14.5; Vis: 45. Ran in hole; reamed 8700' to 8717'. Drilled ahead.
11/9/79 62'	TD: 8877'; MW: 14.5; Vis: 45. Drilled; surveyed. Pulled out of hole; tested blowout-preventer equipment. Cleaned shale tank. Ran in hole.
11/10/79 99'	TD: 8976'; MW: 14.5; Vis: 46. Ran in hole; reamed 8870' to 8877'. Drilled ahead.
11/11/79 77'	TD: 9053'; MW: 14.8; Vis: 54. Drilled; surveyed; pulled out of hole. Ran in hole; circulated out 2,900 units of gas. Washed 20 feet to bottom. Drilled; circulated at 9050'. Had 4,900 units of gas. Drilled ahead; raised mud weight to 14.8.
11/12/79 150'	TD: 9203'; MW: 14.9; Vis: 47. Drilled; circulated and conditioned at 9062'. Drilled ahead.
11/13/79 89'	TD: 9292'; MW: 14.9; Vis: 47. Drilled; surveyed; tripped. Reamed 20 feet. Drilled ahead.
11/14/79 116'	TD: 9408'; MW: 14.9; Vis: 46. Drilled ahead.
11/15/79 103'	TD: 9511'; MW: 14.9; Vis: 46. Drilled ahead.
11/16/79 22'	TD: 9533'; MW: 14.9; Vis: 47. Drilled to 9528'; surveyed. Pulled out of hole; tested blowout-preventer equipment. Ran in hole to 9483'; reamed and cleaned out to bottom. Drilled ahead.
11/17/79 145'	TD: 9678'; MW: 14.9; Vis: 48. Drilled ahead.
11/18/79 107'	TD: 9785'; MW: 14.9; Vis: 48. Surveyed; pulled out of hole. Ran in hole; drilled ahead.
11/19/79 88'	TD: 9873'; MW: 14.9; Vis: 47. Drilled; surveyed. Pulled out of hole; cleaned junk basket. Ran in hole; cleaned to bottom. Drilled ahead.
11/20/79 117'	TD: 9990'; MW: 14.9; Vis: 45. Drilled ahead.

11/21/79 14'	TD: 10,004'; MW: 14.9; Vis: 47. Drilled; circulated; conditioned mud for logs. Short tripped; circulated; surveyed. Pulled out of hole, steel-line measured. Ran DIL/GR/SP.
11/22/79 0'	TD: 10,004'; MW: 14.9; Vis: 55. Ran FDC/CNL/GR/CAL, BHC/GR. HDT-Dipmeter, and Velocity Survey. Shot 24 sidewall cores. All logging to 9988'.
11/23/79 0'	TD: 10,004'; MW: 14.9; Vis: 47. Recovered 23 of 24 sidewall cores. Rigged down logging unit. Ran in hole for clean out. Short tripped; tight from 9978' to 9800'. Circulated. Pulled out of hole; laid down bottom-hole assembly.
11/24/79 0'	TD: 10,004'; MW: 14.9; Vis: 47. Began rigging up to run 9-5/8" casing. Ran 232 joints for 9969.47 feet. Float shoe at 9976.69'; float collar at 9896.93'; insert collar at 9851.61'; DV cementer at 5591.75'; FOs at 3519.22' and 2103.37'. Rigged up to cement 9-5/8" casing.
11/25/79 0'	TD: 10,004'; MW: 14.8; Vis: 48. Conditioned to cement 9-5/8" casing. First stage: Pumped 3 barrels of water with wiper plug. Pumped 1,200 sacks Class "G" cement containing 0.75% D-65 and 0.3% D-13R. Dropped closing plug. Pumped 10 barrels of water; displaced with mud at 8,420 strokes on mud pump. Bumped plug with 3,000 psi. Dropped opening bomb; DV opened with 1,100 psi. Circulated with no contaminated returns. Cement in place 11/24/79 at 10:20 a.m. Second stage: Pumped 30 barrels of water and 1,600 sacks Class "G" cement with 0.75% D-65. Pumped at 6 BPM and 15.8 ppg. Released closing plug. Pumped at 6 BPM and 15.8 ppg. Released closing plug. Pumped 10 barrels of water. Rig-pumped displacement with 386.9 barrels of mud. Bumped plug with 2,200 psi. Cement in place at 11:30 p.m. Recovered 30 barrels of contaminated mud during cement job. Nippled down. Set casing slips with 350,000 pounds. Cut off landing joint. Nippled down blowout preventers.
11/26/79 0'	TD: 10,004'; MW: 14.6; Vis: 46. Nippled up 11", 10,000 psi blowout-preventer stack. Tested blowout-preventer equipment. Laid down test plug.
11/27/79 0'	TD: 10,004'; MW: 14.8; Vis: 43. Installed wear bushing. Picked up 6 1/4" drill collars. Steel-line

	measured to 5585'. Drilled DV collar. Ran in hole to 9850'; drilled insert collar and plug. Drilled hard cement, 9850' to 9896'. Circulated and conditioned mud. Tested 9-5/8" casing to 1,500 psi. Pumped pill; pulled out of hole. Ran CBL/VDL/CCL/GR, 9876' to 3800'. Ran CBL/VDL/CCL/GR, 3988' to surface. Rigged down logging unit.
11/28/79 64'	TD: 10,068'; MW: 14.6; Vis: 38. Finished laying down logging unit. Ran in hole; tested casing to 3,000 psi. Drilled float collar at 9896'; drilled cement to 9978'; drilled shoe; drilled cement to 9990'. Opened hole to 10,004'; drilled to 10,021'. Tested formation to 0.92 psi/ft., 17.68 mud weight equivalent. Drilled to 10,068'; circulated for trip.
11/29/79 24'	TD: 10,092'; MW: 14.5; Vis: 42. Circulated; pulled out of hole. Laid down five drill collars. Picked up bottom-hole assembly and core barrel. Ran in hole; reamed 10,028' to 10,068'. Began coring.
11/30/79 76'	TD: 10,168'; MW: 14.7; Vis: 44. Cut Core No. 3, 10,068' to 10,098'. Pulled out of hole. Recovered 29.5'-core. Ran in hole with bit; ran wireline to crows foot in drill pipe. Reamed to 10,098'. Drilled ahead.
12/1/79 107'	TD: 10,275'; MW: 14.7; Vis: 44. Drilled ahead.
12/2/79 71'	TD: 10,346'; MW: 14.8; Vis: 44. Drilled to 10,292'; surveyed. Pulled out of hole. Ran in hole to 10,280'; reamed to 10,292'. Drilled ahead.
12/3/79 108'	TD: 10,454'; MW: 14.8; Vis: 44. Drilled at 10,388'; had gas-cut mud to 13.6 with 1,170 units. Drilled ahead.
12/4/79 80'	TD: 10,534'; MW: 15.0; Vis: 44. Drilled to 10,534'; surveyed. Pulled out of hole.
12/5/79 60'	TD: 10,594'; MW: 15.0; Vis: 45. Pulled out of hole; tested blowout-preventer equipment. Ran in hole; surveyed. Drilled ahead.
12/6/79 103'	TD: 10,697'; MW: 15.2; Vis: 42. Drilled ahead.
12/7/79 111'	TD: 10,808'; MW: 15.2; Vis: 45. Drilled to 10,808'; circulated.

12/8/79 57'	TD: 10,865'; MW: 15.1; Vis: 45. Surveyed; pulled out of hole. Ran in hole; cleaned out, 10,783' to 10,808'. Drilled ahead.
12/9/79 18'	TD: 10,883'; MW: 15.1; Vis: 45. Drilled to 10,870'; surveyed; pulled out of hole. Ran in hole to 10,840'; reamed to 10,870'. Cut Core No. 4, 10,870' to 10,884'; core barrel jammed. Pulled out of hole.
12/10/79 37'	TD: 10,920'; MW: 15.1; Vis: 46. Pulled out of hole; recovered 14-foot core. Ran in hole; reamed, 10,840' to 10,883'. Drilled ahead.
12/11/79 56'	TD: 10,976'; MW: 15.1; Vis: 43. Drilled ahead.
12/12/79 21'	TD: 10,997'; MW: 15.2; Vis: 46. Drilled; pulled out of hole. Tested lower pipe rams; tested OK. Tested blind rams; cylinder leaking. Ran in hole; surveyed at 10,920'.
12/13/79 91'	TD: 11,088'; MW: 15.2; Vis: 45. Drilled ahead.
12/14/79 45'	TD: 11,133'; MW: 15.2; Vis: 44. Drilled; surveyed. Pulled out of hole. Worked on blowout-preventer equipment.
12/15/79 12'	TD: 11,145'; MW: 15.2; Vis. 48. Worked on blowout-preventer equipment. Ran in hole; reamed and washed, 10,880' to 11,133'. Drilled ahead.
12/16/79 104'	TD: 11,249'; MW: 15.2; Vis: 47. Drilled ahead.
12/17/79 79'	TD: 11,328'; MW: 15.2; Vis: 48. Drilled; surveyed. Pulled out of hole.
12/18/79 0'	TD: 11,328'; MW: 15.2; Vis: 48. Pulled out of hole; tested blowout-preventer equipment. Ran in hole; reamed 10,310' to 11,328'.
12/19/79 120'	TD: 11,448'; MW: 15.4; Vis: 52. Drilled ahead.
12/20/79 72'	TD: 11,520'; MW: 15.5; Vis: 54. Drilled, surveyed; pulled out of hole. Ran in hole.
12/21/79 141'	TD: 11,661'; MW: 15.5; Vis: 51. Ran in hole; reamed to bottom. Drilled ahead.

12/22/79 65'	TD: 11,726'; MW: 15.7; Vis: 58. Drilled; surveyed; pulled out of hole. Ran in hole; reamed 30 feet to bottom. Drilled ahead.
12/23/79 97'	TD: 11,823'; MW: 15.7; Vis: 61. Drilled; surveyed. Pulled out of hole.
12/24/79 74'	TD: 11,897'; MW: 15.7; Vis: 58. Pulled out of hole. Ran in hole; reamed 11,783' to 11,823'. Drilled ahead.
12/25/79 114'	TD: 12,011'; MW: 15.9; Vis: 64. Drilled ahead.
12/26/79 2'	TD: 12,013'; MW: 15.9; Vis: 67. Short tripped. Ran in hole; had 15 feet of fill. Circulated out 2,200 units of gas; surveyed. Pulled out of hole. Picked up core barrel. Ran in hole; had 20 feet of fill. Circulated out 3,500 units of gas. Began coring.
12/27/79 28'	TD: 12,041'; MW: 15.9; Vis: 62. Cut Core No. 5, 12,011' to 12,041'. Pulled out of hole; recovered 30'-core. Tested blowout-preventer equipment; ran in hole.
12/28/79 72'	TD: 12,113'; MW: 15.9; Vis: 61. Ran in hole; reamed core hole. Drilled to 12,113'; surveyed. Pulled out of hole; pipe stuck at 11,247'.
12/29/79 0'	TD: 12,113'; MW: 15.9; Vis: 78. Worked stuck pipe. Mixed and spotted 16.9 ppg SFT; 40 barrels outside string; 20 barrels inside pipe. Worked pipe 15 minutes every hour; moved spotting fluid 1.5 barrels per hour.
12/30/79 0'	TD: 12,113'; MW: 15.9; Vis: 72. Moved spotting fluid 1.5 BPH and worked pipe.
12/31/79 0'	TD: 12,113'; MW: 15.9; Vis: 70. Moved spotting fluid and worked stuck pipe. Broke circulation and displaced spotting fluid; had 2,300 units of trip gas. Ran free-point; pipe stuck at 10,906'. Ran in hole with string shot.
1/1/80 0'	TD: 12,113'; MW: 15.9; Vis: 74. Ran in hole with string shot; backed off at 10,911'. Pulled out of hole. Ran in hole with fishing tools; screwed into fish and jarred; fish came loose. Worked and conditioned pipe and mud. Pipe stuck again; began jarring.

1/2/80 0'	TD: 12,113'; MW: 15.8; Vis: 68. Continued jarring on stuck pipe; pipe pulled loose at 11:30 a.m. Worked and reamed hole; tight, 10,920' to 10,875'. Pulled out of hole; laid down fishing tools and two drill collars. Picked up new bottom-hole assembly; ran in hole.
1/3/80 3'	TD: 12,116'; MW: 15.9; Vis: 60. Ran in hole to 9000'; broke circulation. Ran in hole to 10,600'. Drilled bridges; reamed, cleaned and wiped hole to bottom. Drilled ahead.
1/4/80 81'	TD: 12,197'; MW: 15.9; Vis: 59. Drilled ahead.
1/5/80 5'	TD: 12,202'; MW: 15.9; Vis: 63. Drilled to 12,202'; dropped survey. Tripped out of shoe. Pulled out of hole; magnafluxed bottom-hole assembly. Laid down monel with cracked pin. Tried to test blowout-preventer equipment; blew seal on blind rams. Ran in hole to shoe; worked on blowout preventer.
1/6/80 0'	TD: 12,202'; MW: 15.8; Vis: 63. Repaired blind rams on both sides. Ran in hole; washed 12,185' to 12,202'. Lost 250 pounds pump pressure; gained 10 pump strokes. Pulled out of shoe, looking for hole in drilling string. Found vertical split in seventh joint of heavy weight drill pipe. Pulled out of hole; tested blowout-preventer equipment. Ran in hole.
1/7/80 80'	TD: 12,282'; MW: 15.9; Vis: 54. Ran in hole; reamed, 12,182' to 12,202'. Unplugged bit; drilled ahead.
1/8/80 62'	TD: 12,344'; MW: 15.9; Vis: 56. Drilled ahead.
1/9/80 36'	TD: 12,380'; MW: 15.9; Vis: 53. Drilled; surveyed. Pulled out of hole; tight hole. Ran in hole; tight. Reamed 25 feet to bottom. Drilled ahead.
1/10/80 81'	TD: 12,461'; MW: 15.9; Vis: 49. Drilled ahead.
1/11/80 70'	TD: 12,531'; MW: 15.9; Vis: 52. Drilled ahead.
1/12/80 44'	TD: 12,575'; MW: 16; Vis: 52. Drilled; surveyed; pulled out of hole. Ran in hole.
1/13/80 66'	TD: 12,641'; MW: 16; Vis: 52. Ran in hole; reamed 25 feet. Drilled ahead.

1/14/80 75'	TD: 12,716'; MW: 16.2; Vis: 55. Drilled ahead.
1/15/80 50'	TD: 12,766'; MW: 16.2; Vis: 56. Drilled; circulated; surveyed. Pulled out of hole.
1/16/80 40'	TD: 12,806'; MW: 16.2; Vis: 55. Pulled out of hole; tested blowout-preventer equipment. Ran in hole to shoe. Ran pressure test to 17.3 ppg; no leak off. Ran in hole; reamed 12,742' to 12,766'. Drilled; circulated bottoms-up gas. Drilled ahead.
1/17/80 8'	TD: 12,814'; MW: 17.0; Vis: 65. Drilled; circulated and mixed mud to 16.8 ppg. Short tripped to shoe. Ran in hole; drilled through bridge at 11,010'. Circulated bottoms up, with caving shale. Short tripped.
1/18/80 0'	TD: 12,814'; MW: 17.0; Vis: 70. Finished short trip; circulated bottoms up. Short tripped; tight from 11,014' to 12,814' and at 11,020' and 11,499'. Reamed from 11,874' to 11,940' on trip in. Circulated bottoms up. Pulled out of hole; tight at 11,928'. Began rigging up to log.
1/19/80 0'	TD: 12,814'; MW: 17; Vis: 52. Began running DIL; stopped at 10,250'. Ran conditioning trip. Pulled out of hole; tight at 12,026', 11,177', and 11,000'. Ran DIL/GR/SP and BHCS/GR/TTI.
1/20/80 0'	TD: 12,814'; MW: 17; Vis: 58. Ran in hole; bridges at 11,366' and 11,838'. Conditioned mud. Pulled out of hole; tight at 11,560' and 11,081'. Changed to 7-5/8" rams. Rigged up and began running 7-5/8" liner.
1/21/80 0'	TD: 12,814'; MW: 17; Vis: 62. Ran 78 joints of 7-5/8", 39#, S-95, ABFL4S casing to 12,814', with BOT hanger. Ran total of 3,137.34 feet of casing. Top of liner hanger 9661'. Tie-back sleeve at 9655'. Cemented with 40 barrels of 17 ppg spacer and 896 sacks Class "G" cement with 1.25% D-65, 0.2% D-13R, and 30 pounds per sack Barite. Average weight: 18.1 ppg. Started cement at 12:25 a.m. Cement in place at 3:35 a.m. Floats held; pulled one stand and one single. Pulled out of hole.
1/22/80 0'	TD: 12,814'; MW: 17; Vis: 51. Waited on cement; laid down 8-1/2" bottom-hole assembly and 60 joints of drill pipe. Placed 3-1/2" rams. Tested Hydril to 5,000 psi. Tested blowout-preventer equipment to

	10,000 psi, except 3-1/2" rams. Picked up twenty-four 4-3/4" drill collars. Ran in hole with 8-1/2" bit and scraper. Steel-line measured; tagged liner at 9661'. Circulated.
1/23/80 0'	TD: 12,814'; MW: 16.9; Vis: 62. Circulated bottoms up; pulled out of hole. Ran in hole with 6-1/4" bit, 4-3/4" drill collars, and 3-1/2" drill pipe. Ran in hole to 12,686'; tagged cement. Drilled to 12,734'. Tested liner; had 1,340 psi leak off. Circulated and conditioned mud. Pulled out of hole; picked up E-Z drill retainer.
1/24/80 0'	TD: 12,814'; MW: 16.8; Vis: 54. Ran in hole with retainer; set retainer at 9576'. Established injection of 3 BPM at 1,750 psi. Pumped 15 barrels of water. Tested lines to 5,000 psi. Mixed 200 sacks Class "G" at 18 ppg. Pumped three barrels of water; displaced with 116 barrels of mud. Squeezed 48 barrels out retainer. Maximum pressure: 2,000 psi at 2 BPM. Cement in place 1/23/80 at 2:46 p.m. Reversed out; pulled out of hole. Tested 3-1/2" rams to 3,000 psi. Picked up 6-1/4" bottom-hole assembly. Ran in hole with 8-1/2" bit; tagged retainer at 9565'. Drilled on retainer.
1/25/80 0'	TD: 12,814'; MW: 17; Vis: 53. Drilled on retainer at 9576'; tagged cement at 9586'. Drilled to 9661'. Tested liner to 3,000 psi. Pulled out of hole. Ran in hole with 6-1/4" bit; cleaned out hanger. Ran in hole to 12,734'. Conditioned mud; tested to 3,000 psi. Pulled out of hole; picked up drill-stem test tools.
1/26/80 0'	TD: 12,814'; MW: 17; Vis: 52. Ran in hole with water shut off tools; ran 6,710 foot mud cushion. Opened tool after three hours; had light blow. Closed tool for three hours. Pulled out of hole; mud at 6813'. Ran gyro survey.
1/27/80 18'	TD: 12,832'; MW: 17; Vis: 55. Finished running gyro directional survey. Ran CBL/VDL/CCL/GR log. Laid down 6 1/4" drill collars. Ran in hole with 6 1/4" bit to landing collar. Drilled to 12,832'; ran 20 ppg equivalent gradient shoe test.
1/28/80 47'	TD: 12,879'; MW: 17; Vis: 48. Drilled to 12,879'; pulled out of hole. Picked up new bottom-hole assembly. Ran in hole; reamed from 12,220' to 12,879'. Drilled; surveyed at 12,879' (misrun).
1/29/80 102'	TD: 12,981'; MW: 17; Vis: 48. Drilled ahead.

1/30/80 34'	TD: 13,015'; MW: 17; Vis: 48. Drilled to 13,015'; surveyed. Pulled out of hole. Tested blowout-preventer equipment; changed blind rams. Installed Strip-o-matic. Ran in hole.
1/31/80 73'	TD: 13,088'; MW: 16.9; Vis: 50. Ran in hole; picked up stabilizer and monel drill collar. Ran in hole to 13,015'. Drilled ahead.
2/1/80 91'	TD: 13,179'; MW: 16.9; Vis: 49. Drilled ahead.
2/2/80 56'	TD: 13,235'; MW: 16.9; Vis: 51. Drilled to 13,207'; surveyed. Pulled out of hole; ran in hole with core barrel. Reamed from 13,187' to 13,207'. Began cutting Core No. 6 at 13,207'. Surveyed; misrun.
2/3/80 2'	TD: 13,237'; MW: 17.7; Vis: 50. Cored to 13,236.6'; surveyed. Had 977 units of gas. Bottoms-up mud: 14.9 ppg; raised mud to 17.6 ppg. Returns cut to 15.3 ppg. Had 700 to 1,000 units of gas. Circulated and conditioned mud.
2/4/80 0'	TD: 13,237'; MW: 18.3; Vis: 50. Circulated mud.
2/5/80 8'	TD: 13,245'; MW: 18.3; Vis: 52. Circulated and conditioned mud at 18.3 ppg, with 25 units of background gas. Pulled out of hole with Core No. 6; recovered 27.7 foot core. Tested blowout-preventer equipment. Ran in hole; reamed from 13,130' to 13,237'. Hole sloughed and packed off drill pipe. Drilled ahead.
2/6/80 106'	TD: 13,351'; MW: 18.3; Vis: 54. Drilled; circulated. Drilled; surveyed. Pulled out of hole.
2/7/80 59'	TD: 13,410; MW: 18.3; Vis: 52. Pulled out of hole. Ran in hole; drilled ahead. Mud cut to 16.9 ppg; bottoms up trip gas: 583 units.
2/8/80 116'	TD: 13,526'; MW: 18.3; Vis: 53. Drilled ahead.
2/9/80 52'	TD: 13,578'; MW: 18.3; Vis: 53. Drilled; surveyed. Pulled out of hole. Ran in hole; drilled ahead.
2/10/80 112'	TD: 13,690'; MW: 18.3; Vis: 51. Drilled ahead.

2/11/80 73'	TD: 13,763'; MW: 18.3; Vis: 52. Drilled; surveyed. Pulled out of hole; tested blowout-preventer equipment.
2/12/80 62'	TD: 13,825'; MW: 18.3; Vis: 51. Tested blowout-preventer equipment. Ran in hole; circulated at 12,800'. Ran in hole; drilled ahead.
2/13/80 80'	TD: 13,905'; MW: 18.3; Vis: 50. Drilled ahead.
2/14/80 45'	TD: 13,950'; MW: 18.3. Surveyed. Pulled out of hole; changed bit and bottom-hole reamer. Ran in hole; reamed 15 feet to bottom. Drilled ahead.
2/15/80 83'	TD: 14,033'; MW: 18.3; Vis: 49. Drilled ahead.
2/16/80 53'	TD: 14,086'; MW: 18.3; Vis: 53. Drilled; surveyed. Pulled out of hole; first five stands tight.
2/17/80 68'	TD: 14,154'; MW: 18.3; Vis: 60. Ran in hole; reamed from 14,006' to 14,086'. Drilled ahead.
2/18/80 90'	TD: 14,244'; MW: 18.3; Vis: 61. Drilled ahead.
2/19/80 53'	TD: 14,297'; MW: 18.3; Vis: 58. Drilled; surveyed. Pulled out of hole. Tested blowout-preventer equipment.
2/20/80 58'	TD: 14,355'; MW: 18.3; Vis: 68. Tested blowout-preventer equipment. Ran in hole; reamed from 14,100' to 14,237'. Ran in hole to bottom; drilled to 14,340'. Circulated samples. Drilled ahead.
2/21/80 105'	TD: 14,460'; MW: 18.3; Vis: 48. Drilled ahead; connections tight.
2/22/80 92'	TD: 14,552'; MW: 18.3; Vis: 52. Drilled ahead.
2/23/80 13'	TD: 14,565'; MW: 18.3; Vis: 79. Drilled to 14,553'; surveyed. Pulled out of hole; changed jars. Ran in hole to 14,510'; reamed to 14,553'. Drilled and attempted to pick up bearing from bit core.
2/24/80 42'	TD: 14,607'; MW: 18.3; Vis: 52. Drilled to 14,577'; surveyed. Pulled out of hole; became stuck at 13,535' for 15 minutes. Pulled out of hole. Picked up core barrel; ran in hole. Reamed to 14,577'. Cut Core No. 7, 14,577' to 14,607'. Surveyed; pulled out of hole.

2/25/80 54'	TD: 14,661'; MW: 18.3; Vis: 53. Pulled out of hole with core; received 27 feet. Ran in hole to 14,547'; reamed to 14,607'. Drilled ahead.
2/26/80 75'	TD: 14,736'; MW: 18.3; Vis: 52. Drilled to 14,679'; became stuck for 1-1/2 hours. Drilled to 14,700'; short tripped 14 stands. Tight, 14,700' to 14,200'. Trip gas: 1,200 units. Drilled ahead.
2/27/80 42'	TD: 14,778'; MW: 18.3; Vis: 46. Drilled to 14,778'; surveyed. Pulled out of hole; tight. Tested blowout-preventer equipment; ran in hole.
2/28/80 59'	TD: 14,837'; MW: 18.3; Vis: 50. Ran in hole; broke circulation at 12,500'. Reamed from 14,730' to 14,750'. Became stuck for 1-1/2 hours; worked loose. Reamed from 14,750' to 14,778'. Became stuck again for 1/2 hour; pulled loose. Drilled ahead.
2/29/80 70'	TD: 14,907'; MW: 18.3; Vis: 48. Drilled to 14,852'. Short tripped to 13,200'. Drilled ahead.
3/1/80 36'	TD: 14,943'; MW: 18.3; Vis: 62. Drilled to 14,920'; surveyed. Pulled out of hole; tight, 13,675' to 13,200'. Ran in hole; drilled ahead.
3/2/80 77'	TD: 15,020'; MW: 18.3; Vis: 5. Drilled ahead.
3/3/80 60'	TD: 15,080'; MW: 18.3; Vis: 50. Drilled to 15,025'; short tripped to shoe. Tight hole from 15,020' to 12,900'. Ran in hole; picked up kelly at 14,915'. Reamed from 14,995' to 15,025'. Drilled to 15,055'; became stuck for one hour. Worked loose; drilled ahead.
3/4/80 31'	TD: 15,111'; MW: 18.4; Vis: 54. Drilled to 15,087'; high torque. Circulated to clean hole; surveyed. Pulled out of hole; tight from 15,070' to 14,600', at 13,911', at 13,661, and at 12,975'. Pulled out of hole; checked reamers and stabilizers. Ran in hole to 15,012'; cleaned to 15,087'. Drilled ahead.
3/5/80 80'	TD: 15,191'; MW: 18.4; Vis: 50. Drilled ahead.
3/6/80 72'	TD: 15,263'; MW: 18.4; Vis: 48. Drilled ahead.
3/7/80 20'	TD: 15,283'; MW: 18.4; Vis: 55. Drilled; surveyed. Pulled out of hole; tested blowout preventer. Ran in hole; washed and reamed 39 feet to bottom. Drilled ahead.

3/8/80 69'	TD: 15,352'; MW: 18.4; Vis: 47. Drilled; short tripped; drilled.
3/9/80 48'	TD: 15,400'; MW: 18.4; Vis: 52. Drilled; surveyed. Pulled out of hole; tight in open hole.
3/10/80 62'	TD: 15,462'; MW: 18.4; Vis: 55. Ran in hole and retrieved screen. Cut drilling line. Ran in hole and reamed from 15,280' to 15,400'. Drilled ahead.
3/11/80 76'	TD: 15,538'; MW: 18.4; Vis: 49. Drilled; surveyed. Pulled out of hole; very tight.
3/12/80 0'	TD: 15,538'; MW: 18.4; Vis: 50. Pulled out of hole; lost survey tool. Tested blowout-preventer equipment; repaired; tested. Ran in hole, looking for survey tool.
3/13/80 48'	TD: 15,586'; MW: 18.4; Vis: 48. Continued looking for survey tool; found it lodged in third stand. Reamed 15,320' to 15,538'. Drilled ahead.
3/14/80 25'	TD: 15,611'. Drilled to 15,611'; twisted off drill pipe. Pulled out of hole; top of fish at 10,021'. Made up overshot with 4-1/2" grapple. Ran in hole; stabbed on fish; pulled off twice. Pulled out of hole; dressed overshot with 4-1/4" grapple. Ran in hole.
3/15/80 0'	TD: 15,611'; MW: 18.4; Vis: 46. Ran in hole; stabbed fish with overshot; pulled loose. Pulled out of hole; picked up ten 4-3/4" drill collars. Ran in hole with cutter; cut off drill pipe. Recovered two feet of 3-1/2" drill pipe with tool joint. Ran in hole with overshot; latched onto fish; worked fish loose. Laid down one single. Pulled tight; circulated.
3/16/80 0'	TD: 15,611'; MW: 18.4; Vis: 58. Circulated; pulled out of hole. Hole very tight; became stuck at 13,555'; pulled loose. Laid down fishing tools; laid down 13 joints of 3-1/2" drill pipe with thin tool joints; laid down ten drill collars. Ran in hole and circulated at 12,800'; ran in hole.
3/17/80 0'	TD: 15,611'; MW: 18.4; Vis: 55. Ran in hole. Reamed and washed to 15,002'; became stuck. Reamed to 15,319'; became stuck; twisted off. Pulled out of hole. Ran in hole with outside cutter; cut off tool joint. Top of fish at 9689'. Pulled out of hole.
3/18/80 0'	TD: 15,611'; MW: 18.3; Vis: 46. Pulled out of hole with cutter and three feet of 3-1/2" drill pipe. Ran in hole and latched onto fish with overshot; pulled fish

	loose. Circulated; pulled fish loose. Pulled out of hole; recovered 3-1/2" drill pipe and five drill collars. Fish left in hole: bit, bit sub, monel, 17 drill collars, jars, two drill collars. Ran in hole with 4-5/8" overshot.
3/19/80 0'	TD: 15,611'; MW: 18.4; Vis: 64. Ran in hole with overshot and fishing tools to 14,500'. Circulated bottoms up; trip gas: 1,480 units. Tagged fish at 14,811'; engaged fish and pulled loose. Circulated; pumped out six singles. Very tight at 13,535'. Worked string; jars unloaded; dropped fish. Pulled out of hole.
3/20/80 0'	TD: 15,611'; MW: 18.4; Vis: 52. Pulled out of hole; string parted at bottom of bumper sub. Tested blowout-preventer equipment. Ran in hole to 13,000'; washed and reamed to 13,027'. Tagged fish; chased to 13,036'. Circulated and conditioned hole. Pulled out of hole. Picked up fishing tools; ran in hole.
3/21/80 0'	TD: 15,611'; MW: 18.4; Vis: 58. Ran in hole with fishing tools to 13,036'; fished to 13,069'. Pulled out of hole; inspected bottom-hole assembly. Picked up bit; ran in hole to 13,036'. Cleaned out to 13,101'. Pulled out of hole.
3/22/80 0'	TD: 15,611'; MW: 18.6; Vis: 55. Ran in hole with overshot; top of fish at 13,101'. Could not get over fish. Pulled out of hole; ran in hole with bit. Bridge at 13,083' and five feet of fill on top of fish. Circulated and conditioned mud.
3/23/80 0'	TD: 15,611'; MW: 18.6; Vis: 54. Conditioned mud at 13,101'. Made short trip; bridge at 12,950'. Circulated and conditioned mud. Pulled out of hole; picked up overshot. Ran in hole to 13,075'; washed to 13,101'. Fish moved downhole. Washed and reamed to 13,328'. Pulled out of hole; ran in hole to shoe with bit and circulated.
3/24/80 0'	TD: 15,611'; MW: 18.6; Vis: 50. Wiped and reamed hole, 12,814' to top of fish at 14,799'. Circulated and conditioned mud. Pulled out of hole; picked up fishing tools. Ran in hole.
3/25/80 0'	TD: 15,611'; MW: 18.6; Vis: 49. Pulled out of hole with bit; ran in hole with fishing tools at 14,813'. Stabbed onto fish; worked fish to 12,966'; lost fish. Pulled out of hole; ran in hole with bit. Circulated and conditioned mud at 12,906'.

3/26/80 0'	TD: 15,611'; MW: 18.6; Vis: 49. Circulated and conditioned mud. Reamed and wiped to 14,803', top of fish. Pulled out of hole; ran in hole with fishing tools.
3/27/80 0'	TD: 15,611'; MW: 18.6; Vis: 52. Ran in hole with overshot. Cleaned to top of fish at 14,803'; caught fish; pulled out of grapple. Pulled out of hole; dressed overshot with 4-5/8" grapple. Ran in hole; conditioned and circulated mud. Worked over fish; pulled out of hole with fish.
3/28/80 0'	TD: 15,611'; MW: 18.6; Vis: 52. Continued tripping out with fish; became stuck at 12,900'. Worked pipe; spotted Lubriseal nut plug and mica pill. Pulled loose. Pulled out of hole; laid down fish. Tested blowout-preventer equipment; picked up bottom-hole assembly.
3/29/80 0'	TD: 15,611'; MW: 18.6; Vis: 53. Checked bottom-hole assembly. Ran in hole to 12,900'; drilled bridges. Became stuck at 12,900'; pulled loose. Became stuck at 12,949'; pulled loose. Reamed to 13,000'; ran in hole to 15,083'; reamed to 15,520'. Circulated for short trip.
3/30/80 0'	TD: 15,611'; MW: 18.6; Vis: 60. Wiped and reamed to 15,601'; circulated and conditioned mud. Short tripped. Drilled bridges from 12,900' to 13,275'. Circulated and conditioned hole to 15,565'. Cleaned to 15,580'; hole tight. Circulated and conditioned mud. Pulled out of hole. Rigged up Schlumberger unit.
3/31/80 0'	TD: 15,611'; MW: 18.6; Vis: 55. Ran Temperature log; tool failed. Pulled out of hole; ran in hole to 7-5/8" shoe. Pulled out of hole. Attempted to run GR/SP/DIL; hit bridge at 12,839'. Pulled out of hole; ran in hole to 15,585'. Circulated and conditioned mud; pulled out of hole.
4/1/80 0'	TD: 15,611'; MW: 18.6; Vis: 50. Pulled out of hole. Ran GR/SP/DIL to 13,172'; tool stopped. Logged from 13,172' to 12,938'; tool stuck; pulled loose. Pulled out of hole with log. Ran in hole with bit to 13,202'; washed and reamed to 13,235'. Ran in hole to 15,585'; circulated and conditioned mud. Pulled out of hole to shoe; ran in hole.
4/2/80 0'	TD: 15,611'; MW: 18.6; Vis: 52. Finished 30-stand wiper trip; pulled out of hole. Hole in good condition. Rigged up logging unit; tool stopped at

13,044'. Pulled out of hole. Assembled Sonic and DIL; ran in hole. Log stopped at 13,044'. Pulled out of hole; log stuck at 12,940'. Pulled loose; pulled out of hole. Picked up bottom-hole assembly. Ran in hole; hit bridge at 13,077'. Reamed to 13,274'. Ran in hole; hit ledge at 13,435'. Ran in hole to 15,585'; circulated and conditioned mud. Tripped out.

4/3/80
0'

TD: 15,611'; MW: 18.4; Vis: 45. Pulled out of hole; tight from 14,740' to 14,550'. Ran in hole with Schlumberger unit; log stopped at 13,350'. Tried to spud through; lost electrical contact. Pulled out of hole; stuck at 13,191'. Worked loose; stuck at 12,880'. Worked loose; pulled out of hole. Ran in hole with GR/CAL/CNL/FDC; logged shoe to lap. Hooked up and ran Velocity Survey to shoe. Rigged down Schlumberger unit. Ran in hole open ended.

4/4/80
0'

TD: 15,611'; MW: 18.6; Vis: 46. Ran TDT log through drill pipe; tool failed. Pulled out of hole; circulated and conditioned mud. Ran GR log; tool failed. Circulated while waiting on new logging tool. Reran GR to 15,490'; pulled out of hole.

4/5/80
0'

TD: 15,611'; PBTD: 13,180'; MW: 18.5; Vis: 45. Pulled out of hole with drill pipe; rigged up logging unit. Tool stopped at 12,900'. Ran in hole with open ended drill pipe. Circulated and conditioned mud. Set Plug No. 1, 14,450' to 14,250', with 75 sacks Class "G" containing 33 pounds/sack D-76, 1.65% D-65, 0.1% D-28, and 0.2% D-46 at 19.5 ppg. Set Plug No. 2, 13,787' to 13,180', with 240 sacks Class "G" as in Plug No. 1. Circulated and conditioned mud.

4/6/80
0'

TD: 15,611'; PBTD: 9416'; MW: 18.3; Vis: 58. Circulated and conditioned mud. Set Plug No. 3, 12,913' to 12,637' (across shoe of 7-5/8" liner), with Class "G" cement containing 20 pounds/sack D-76, 1.25% D-65, 0.2% D-13R, 5 pounds/sack Barite mixed at 19.0 ppg. Pulled out of hole to 9910'; circulated and conditioned mud. Set Plug No. 4, 9910' to 9416' (across liner lap), with 147 sacks Class "G" cement as in Plug No. 1. Pulled out of hole to 9000'. Reversed; pulled out of hole. Laid down 3-1/2" drill pipe and drill collars. Ran in hole with bit and casing scraper to 8460'. Pulled out of hole; ran in hole with retainer.

4/7/80

TD: 15,611'; PBTD: 8143'; MW: 14.5; Vis: 40. Set retainer at 8401'; circulated and conditioned mud to 14.5 ppg. Spotted Plug No. 5, 8343' to 8243', with

50 sacks Class "G" containing 1.25% D-65, 0.2% D-13R, and 30 pounds/sack Barite. Mixed at 19.1 ppg. Pulled out of hole to 7800'. Reversed; pulled out of hole. Ran bond log; reran bond log.

4/8/80 — TD: 15,611'; PBTD: 8243'; MW: 14.5; Vis: 41. Finished running bond log; tested lubricator. Repaired; tested lubricator. Perforated, 5366' to 5394', with 4 shots per foot. Ran in hole for Drill-Stem Test No. 3. Set packer at 5341'; opened packer at 2:30 a.m.; had surface leaks. Shut in at surface and repaired leaks. Reopened at 4:20 a.m. Well flowed at 3.2 MCF on 16/64" choke with 1,700 psi surface pressure.

4/9/80 — TD: 15,611'; PBTD: 8243'; MW: 14.5; Vis: 43. Tested as per program; cleaned up buildup. First flow on 6/64" choke; second flow on 8/64" choke; third flow on 12/64" choke.

4/10/80 — TD: 15,611'; PBTD: 8243'; MW: 14.4; Vis: 42. Final flow on 17/64" choke. Shut in for final buildup.

4/11/80 — TD: 15,611'; PBTD: 5295'; MW: 11.8; Vis: 41. Shut in for final buildup. Reversed out drill pipe. Pulled test at end of buildup. Pulled out of hole; ran in hole and set retainer at 5295'. Squeezed with 150 sacks Class "G" cement with 0.75% D-65. Injection rate: 4-1/2 BPM at 1,500 psi. Cement squeeze: 3-1/2 BPM at 1,400 psi. Cement in place 4/10/80 at 11:15 a.m. Final pressure: 3 BPM at 1750 psi. Pulled four stands. Reversed drill pipe; circulated and conditioned mud back at 9.7 ppg.

4/12/80 — TD: 15,611'; PBTD: 5296'; MW: 9.7; Vis: 37. Conditioned mud back to 9.7 ppg. Began laying down excess 5" drill pipe.

4/13/80 — TD: 15,611'; PBTD: 5296'; MW: 9.7; Vis: 38. Ran in hole to FO and opened FO. Could not circulate with 3,000 pounds; closed FO. Pulled out of hole; ran in hole with bit and scraper; circulated. Pulled out of hole. Perforated from 2652' to 2664' at 4 shots per foot. Ran in hole with test tools for Drill-Stem Test No. 4; set packer at 2638'. Opened tool at 1:00 a.m. with medium to strong blow. Had gas to surface in 10 minutes; no fluid to surface. Shut in at 2:00 a.m.; opened for final flow at 4:00 a.m. Initially flowed at 95 pounds; down to three pounds in two hours. Gas: TSTM.

4/14/80 — TD: 15,611'; PBTD: 1478'. Completed drill-stem test; pulled out of hole and laid down test tools.

Picked up EZ drill retainer and set at 2506'. Cemented with 150 sacks Class "G"; left 10 barrels on top retainer. Ran in hole; perforated four shots at 1500'. Set EZ drill retainer at 1478'. Pumped 453 sacks ArcticSet at 15.2 ppg. Lost circulation. Pumped 320 sacks additional ArcticSet; left 10 barrels on top retainer. Waited on cement.

4/15/80 TD: 15,611'; PBTD: 1478'. Displaced mud to water to diesel. Cleaned mud pumps and tanks.

4/16/80 TD: 15,611'; PBTD: 1478'. Released rig April 15, 1980, at 11:00 p.m. Began rigging down.

DRILLING TIME ANALYSIS

SEABEE TEST WELL NO. 1

NABORS ALASKA DRILLING, INC., RIG 25

Spud 7/1/79; Rig released 4/15/80

Total Depth: 15,611 Feet

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 1 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
1979 6-13	24																							Rigging Up	Began Rigging Up Camp
6-14	24																							Rigging Up	
6-15	24																							Rigging Up	
6-16	24																							Rigging Up	
6-17	24																							Rigging Up	
6-18	24																							Rigging Up	
6-19	24																							Rigging Up	
6-20	24																							Rigging Up	
6-21	24																							Rigging Up	
6-22	24																							Rigging Up	
6-23	24																							Rigging Up	
6-24	24																							Rigging Up	
6-25	24																							Rigging Up	
6-26	24																							Rigging Up	
6-27	24																							Rigging Up	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
6-28	24																							Rigging Up	
6-29	24																							Rigging Up	
6-30	24																							Rigging Up	Completed Rigging Up
7-1	2½	8½		½	½							12												Welding 30' Flange	Spudded Well at 2:30 p.m.
7-2		16		6¼				1																Drilling	
7-3		18½	3			½	1¼																	Drilling	
7-4		16		4	¼	¼	2																	Drilling	
7-5		14½		2	¼				6½															Drilling	Running Schlumberger Wireline Logs
7-6			10½	1½					4														8	Breaking Down BHA	
7-7			19	5																				Reaming	
7-8			15¼	8																				Tripping	
7-9			17	7																				Reaming	
7-10			19	3¼			1																	Reaming	
7-11			18½	4¼																			1¼	Reaming	
7-12				5						16½													1¾	Tripping	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 3 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
7-13										12						12								Running Casing	
7-14				4½				2		17													¾	Pulling Casing	
7-15										24														Running Casing	
7-16											22	2												Waiting on Cement	
7-17												14											10	Welding on 20" Head	
7-18			2	3							10		7										2	Nipple Up BOP	
7-19		16		3	⅛																		4¾	Tripping	
7-20		22½			½			1																Drilling	
7-21		13½	½	7½	⅛			2½																Tripping	
7-22		18¼	¾	4	½																			Tripping	
7-23		19½		2½	1			1½																Drilling	
7-24		11¾	2½	9																			¾	Tripping	
7-25		7½		6				6	4½															Drilling	Running Schlumberger Wireline Logs
7-26				7				2	13½														1½	Logging	
7-27				3				¾		20¼														Running Casing	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 4 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
7-28				18¾				1¼				4												Tripping	
7-29												15½											8½	Cutting Casing	
7-30				1¾				15		2¼		3½	1½											Tripping	
7-31		10½	1	5				½															7	Drilling Cement	
8-1		8¾	1½	13	¾																			Drilling	
8-2		16¼		4½	1			1¼								1								Drilling	
8-3		6		6												12								Fishing	
8-4		19¾			¾			2½															1	Drilling	
8-5								23¾															¼	Circulating	
8-6				8¾				12¾															2½	Circulating	
8-7				5				3½										15½						Drill Stem Testing	DST No. 1-Failed
8-8			½	13				4¼									3⅛	3						Tripping	Core No. 1: 5390' - 5402'
8-9		11		2				1¾										9⅛						Tripping	DST No. 2
8-10		22½			1½																			Drilling	
8-11		15½	¾	5½	½	½	1¼																	Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
8-12		24																						Drilling	
8-13		13		4½	½	½							5										½	Drilling	
8-14		23¼	¾																					Drilling	
8-15		1	1	10¾	½			6½									3½						1	Tripping	Crew Walked Off Rig at 9:00 p.m.
8-16								24																Circulating	Core No. 2: 6541' - 6551'
8-17								24																Circulating	
8-18			2	5½				16½																Waiting on Orders	
8-19				7				6½	9	1½														Logging	Running Schlumberger Wireline Logs
8-20				8½				3½			12													Waiting on Cement	
8-21				4			1												8				11	Repairing Valve in Mud Line	Well Suspended at 2:15 p. m.
				WELL SUSPENDED DUE TO LABOR DISPUTE																					
10-16																							24	Mixing Mud	Preparing for Re-entry
10-17				4¾			1¼	6¾															11½	Circulating	
10-18				6									5										13	Testing BOPs	
10-19				4¾																			19¼	Drilling Cement	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 6 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
10-20		1	½	5		½		12															5	Circulating & Conditioning	
10-21		18½	1	4		½																		Drilling	
10-22		21½		1½	½	½																		Drilling	
10-23		8½	2½	11½	½	½																	½	Washing & Reaming	
10-24		23½				½																		Drilling	
10-25		15¼		5		½							3⅛											Drilling	
10-26		17	½	3		½	3																	Drilling	
10-27		15	¾	6¼	½	½																	1	Tripping	
10-28		23½				½																		Drilling	
10-29		12¾	1½			7¼																	2½	Drilling	
10-30		24																						Drilling	
10-31		15	1	7½	½																			Drilling	
11-1		24																						Drilling	
11-2		13½		6½	½								3½											Testing BOPs	
11-3		15		7½	½																		1	Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 7 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
11-4		22	½	1½																				Drilling	
11-5		14	½	9	½																			Drilling	
11-6		18	½	5½																				Washing & Reaming	
11-7		15½	½	6½	½									1										Tripping	
11-8		19½		4	½																			Drilling	
11-9		12	½	5½									2½										3½	Pulling Rotary Bushing	
11-10		15½		5½	½			2½																Drilling	
11-11		16¼	½	2				5¼																Drilling	
11-12		19		4½	½																			Drilling	
11-13		19	½	4½																				Drilling	
11-14		24																						Drilling	
11-15		10		6½	½								4										3	Drilling	
11-16		18½	1	3½																			1	Drilling	
11-17		12½		9	1																		1½	Drilling	
11-18		19½		4	½																			Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
11-19		18½	½	4½																			½	Drilling	
11-20		9¼		6½	½			7¼																Drilling	
11-21									24															Logging	Running Schlumberger Wireline Logs
11-22			½	7				8	7														1½	Logging	
11-23										24														Running Casing	
11-24								4½		9	10												½	Conditioning Mud	
11-25												24												Nipple Up BOP	
11-26				11½				1	½				6½										4½	Testing BOPE	
11-27		8		3		¼			8														4¾	Logging	Ran CBL/VDL/CCL/GR
11-28		4¼	1¼	9¾				1½									3¼						3	Circulating Samples	
11-29		6½	½	7½													7½						2	Coring	Cut Core No.3: 10,068'-10,098'
11-30		23½					½																	Drilling	
12-1		16	½	6¼	½	¼																	½	Drilling	
12-2		23¼				¼																		Drilling	
12-3		23¾				⅛																		Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 9 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
12-4		8¼	½	6¾	2¾								5										¾	Tripping	
12-5		23¾				¼																		Drilling	
12-6		23¾				¼																		Drilling	
12-7		12	½	9½	½	½		1																Circulating	
12-8		7½	1¼	9½	½			1½									2¾						1	Drilling	
12-9		7½	1	10½		½											4½							Tripping	Cut Core No. 4:10,870'-10,884'
12-10		23¾				¼																		Drilling	
12-11		9¼		7¾	½								5½										1	Drilling	
12-12		23	1																					Drilling	
12-13		21		2½	½																			Drilling	
12-14			2	5½																			16½	Repairing BOPs	
12-15		21	3																					Drilling	
12-16		24																						Drilling	
12-17		4	5½	8	½								6											Tripping	
12-18		18	6																					Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 10 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
12-19		18¾		4¼	½																		½	Drilling	
12-20		15	1½	7		½																		Tripping	
12-21		12½	¼	10	¾																			Drilling	
12-22		24																						Drilling	
12-23		10¾	1¼	11¼	¾																			Tripping	
12-24		24																						Drilling	
12-25		5	1	13	½			2									1½						1	Tripping	
12-26			2½	8									4½				9							Coring	Cut Core No. 5: 12,011'-12,041'
12-27		14	2	4½									3½											Tripping	
12-28		3½		1	½																		19	Stuck In Hole	DC's at 10,580
12-29																							24	Stuck In Hole	
12-30																6½							17½	Working Pipe	
12-31				8½					9½														6	Tripping	Made Up Fishing Tools
1980 1-1			½	11½												11½							½	Fishing	
1-2			13	8		2																	1	Cutting Drilling Line	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 11 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
1-3		19	5																					Drilling	
1-4		8		4¼	¾								3½										7	Drilling	
1-5			1	14			9																	Working On Blind Rams	
1-6		15	¾	4¾									3										½	Tripping	
1-7		20		4																				Drilling	
1-8		17		7																				Drilling	
1-9		19½	½	4																				Drilling	
1-10		24																						Drilling	
1-11		22½		1½																				Drilling	
1-12		15	½	8½																				Tripping	
1-13		24																						Drilling	
1-14		22						2																Drilling	
1-15		4¾	1¼	10	½			2¼					4½										¾	Tripping	
1-16		8½	½	5				10																Drilling	
1-17			1	13				10																Tripping	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 12 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
1-18				15½				4	4½															Running Logging Tools	Running Schlumberger Wireline Logs
1-19				7				4¼	12														3/4	Logging	
1-20		4¼		6¾				7		6½														Running Casing	
1-21				9½						4			5										5½	Tripping	
1-22		2		14¾				3½															3¾	Circulating Bottoms Up	
1-23				15¾				1¾			1		1½							3			1	Picking up E-Z Drill	
1-24	9½			7½				2			3												2	Drilling	
1-25				10														14						Tripping	
1-26				5					18½														½	Preparing To Log	Ran C3L/VDL/CCL/GR
1-27		16		4	1/4																		3¼	Testing Formation	
1-28		18	1/4	5¼																				Drilling	
1-29		14¾		4	½								4¾											Drilling	
1-30		12¾		5¼									2										4	Repairing Strip-O-Matic	
1-31		23¼						¼																Drilling	
2-1		14	1/4	8½	1/4																			Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
2-2								17½									6½							Coring	Core No. 6: 13,207'-13,236.6'
2-3								23¾															¼	Conditioning Mud	
2-4			2¼	9¼				8					3										1½	Conditioning Mud	
2-5		18½	3¾					1¾																Drilling	
2-6		12¾		10½	¾																			Surveying	
2-7		24																						Drilling	
2-8		12½		11	¾																			Drilling	
2-9		24																						Drilling	
2-10		21		2½	½																			Drilling	
2-11		9½		7½									5										2½	Testing BOPE	
2-12		24																						Drilling	
2-13		18½		5	½																			Drilling	
2-14		19½	½	4																				Drilling	
2-15		24																						Drilling	
2-16		14	½	7¾	1																		¾	Tripping	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
2-17		24																						Drilling	
2-18		20¼		2¼	½																			Drilling	
2-19		7½	½	9½									6½											Testing BOPE	
2-20		21																					3	Drilling	
2-21		24																						Drilling	
2-22		6½		10¾	¾			3															3	Drilling	
2-23		3¼	1	13¼	1												3½						2	Drilling	
2-24		8	¼	9¼	¾												3½						1¾	Tripping	Core No. 7:14,577'-14,607'
2-25		19½		3																			1½	Drilling	
2-26		17		6									1											Drilling	
2-27		12½	1	6									3										1½	Drilling	
2-28		21¼		1																			1¾	Drilling	
2-29		10		12¼	½																		¾	Drilling	
3-1		23																					1	Drilling	
3-2		16½	½	6																			1	Drilling	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 15 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
3-3		8½	1	12¼	½			1															FMU	Drilling	
3-4		22																					2	Drilling	
3-5		17¾	1¼	5																				Drilling	
3-6		7½		12¾	¾								3											Drilling	
3-7		20¼	½	2½																			FMU	Drilling	
3-8		15½		7¾	¾																			Drilling	
3-9		7½	1¼	15																			½	Tripping	
3-10		23																					1	Drilling	
3-11		1		12½									2½										8	Tripping	
3-12		7¾	2¼		10½			½				2	I											Tripping	
3-13		12½		6																			5½	Drilling	
3-14				9												14							1	Tripping	
3-15				13½				3½								6							1	Circulating	
3-16			12½	5½																			6	Washing & Reaming	
3-17								1½								22½								Fishing	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 16 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
3-18				20½				1½															2	Tripping	
3-19			3	11									5½										4½	Tripping	
3-20			2	15½				½								4							2	Tripping	
3-21				17½												5¾							¾	Tripping	
3-22				12½				6½								5								Conditioning Mud	
3-23			14	6				4																Tripping	
3-24				14¾				½								7¾							1	Tripping	
3-25			5	6¾				4								8⅛								Washing & Reaming	
3-26				7				4								12							1	Tripping	
3-27				6½				3¾								13¾								Fishing	
3-28			5	11⅛									2¾			3							2	Tripping	
3-29			11½	5⅜				7																Washing & Reaming	
3-30				10⅜		¾			12½															Logging	Running Schlumberger Wireline Logs
3-31			2	12½				4½	4½														¾	Conditioning Mud	
4-1			2	11¾				3½	6¾															Tripping	

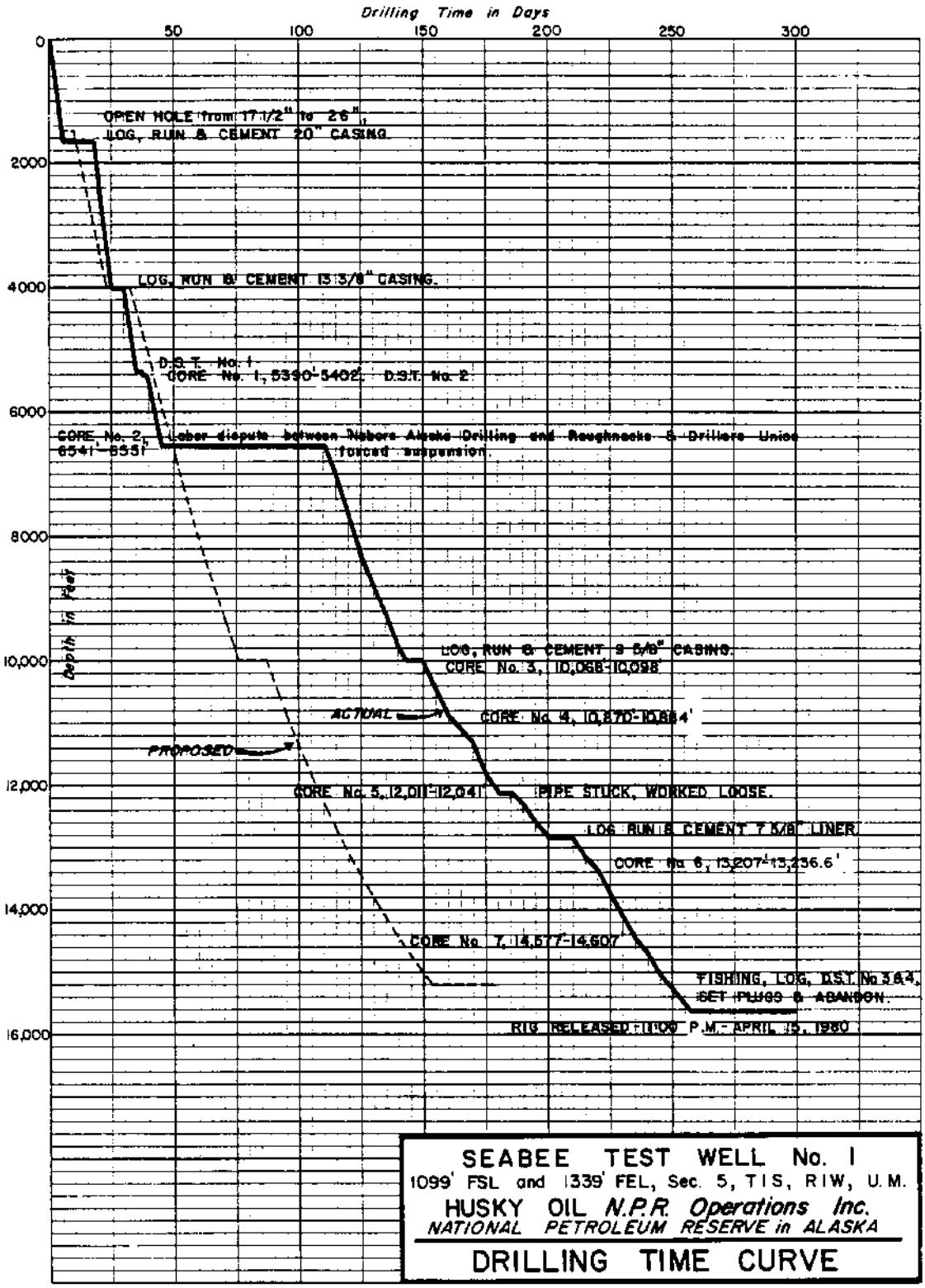
DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 17 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
4-2			5½					4	14½															Tripping	
4-3			7	5					12															Tripping	Attempting to Complete Schlumberger Wireline Logs
4-4				7¾				8	6¼										1½				¼	Circulating	
4-5				12¼				6⅛											5¼					Conditioning Mud	Set Plugs 1 & 2
4-6				6½				16¾											¾					Conditioning Mud	Set Plugs 3, 4, & 5
4-7				¾					18¾									4½						Logging	Ran CBL Log, DST No. 3
4-8																		24						Drill Stem Testing	
4-9																		24						Drill Stem Testing	
4-10				5½				12										4½		2				Drill Stem Testing	
4-11								24																Circulating Mud	
4-12				15¼				1½															¾	Tripping	
4-13				8¾															13		1¼		1	Drill Stem Testing	DST No. 4
4-14	12			2½				7½												1			1	Conditioning Mud	
4-15	24																							Cleaning Mud Pits	Released Rig at 11:00 p.m.
4-16	24																							Cleaning Location	

DRILLING TIME ANALYSIS (HOURS) - HUSKY NPR OPERATIONS, INC. SEABEE TEST WELL NO. 1 Page 18 of 18

DATE	RIG UP/RIG DOWN	DRILLING	REAMING	TRIP	DEV. SURVEY	RIG MAINT.	RIG REPAIR	CIRC. & COND. MUD	LOGGING	CASING & CEMENT	W O C	NIPPLE UP/DOWN BOP	TEST BOP	CHANGE BHA	LOST CIRC.	FISHING	CORING	DST	PLUG BACK	SQUEEZE CEMENT	DIR. WORK	W O MAT./EQUIP.	OTHER	Operations at 6:00 a.m.	Comments
4-17	24																							Cleaning Location	
4-18	24																							Cleaning Location	
4-19	24																							Cleaning Location	
4-20	24																							Cleaning Location	
4-21	24																							Cleaning Location	
4-22	24																							Cleaning Location	
4-23	24																							Cleaning Location	
4-24	24																							Cleaning Location	
4-25	12																							Cleaning Location	
TOTAL	70d		273¾	50		20¼		196¾		58		120¼		-0-		48½		28½		1¼		356¼			
HOURS		2270¾		1273¼		19½		446¼		137		77		1		145		98¾		6		-0-			

C6


Drilling Time in Days
50
100
150
200
250
300
0
2000
4000
6000
8000
10,000
12,000
14,000
16,000
Depth in Feet
OPEN HOLE from 17 1/2" to 26",
LOG, RUN & CEMENT 20" CASING.
LOG, RUN & CEMENT 13 3/8" CASING.
D.S.T. No. 1
CORE No. 1, 5390'-5402', D.S.T. No. 2
CORE No. 2, 6541'-6551'
Labor dispute between Nabors Alaska Drilling and Roughnecks & Drillers Union forced suspension.
LOG, RUN & CEMENT 9 5/8" CASING.
CORE No. 3, 10,068'-10,098'
ACTUAL
CORE No. 4, 10,870'-10,884'
PROPOSED
CORE No. 5, 12,011'-12,041'
PIPE STUCK, WORKED LOOSE.
LOG RUN & CEMENT 7 5/8" LINER
CORE No. 6, 13,207'-13,236.6'
CORE No. 7, 14,577'-14,607'
FISHING, LOG, D.S.T. No. 3 & 4,
SET PLUGS & ABANDON.
RIG RELEASED 11:00 P.M. APRIL 15, 1980
SEABEE TEST WELL No. 1
1099' FSL and 1339' FEL, Sec. 5, T1S, R1W, U.M.
HUSKY OIL N.P.R. Operations Inc.
NATIONAL PETROLEUM RESERVE in ALASKA
DRILLING TIME CURVE

ARCTIC DRILLING SERVICES

Drilling Mud Record

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCKPOINT _____ DATE _____ BAROID ENGINEER _____

CASING PROGRAM: 30 inch at 115 ft.
20 1617
13 3/8 inch at 3983 ft.
9 5/8 9980
7 5/8 inch at 9661 ft.
to 12,814

TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND	RETORT			CEC	REMARKS AND TREATMENT
1979	feet	lb/gal	Sec API @ °F	PV @ °F		10 sec/10 min	Strip ☐ Meter ☐	ml API	HTHP @ °F	Cake 32nds	pf	Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, me/ml	
7/1	300	15.9	41	6	24	4/28	12	22	–	4	.9	1.2	50	40	1/4	6	0	94	–	
7/2	745	9.4	45	8	34	8/30	11	10	–	2	.4	.5	100	40	1/4	8	0	92	–	
7/3	1094	9.6	40	20	12	2/8	9	9	–	2	.1	.3	100	20	1/4	8	0	92	–	
7/4	1428	9.6	60	22	32	8/28	8.5	8	–	2	.1	.1	100	20	1/4	8	0	92	–	
7/5	1623	9.7	82	25	43	14/37	8.5	8	–	2	.1	.1	100	20	1/4	9	0	92	–	
7/6	457	9.4	41	18	15	2/8	8.5	9.2	–	2	.1	.1	100	40	1/4	7	0	93	–	
7/7	970	9.5	50	23	20	4/20	8.5	8.2	–	2	.1	.1	100	20	1/4	7	0	93	–	
7/8	1169	9.4	70	27	33	20/36	8.5	8.8	–	2	.3	.3	100	8	1/4	7	0	93	–	
7/9	1325	9.4	81	27	38	14/40	8.5	8.2	–	2	.1	.3	100	8	1/4	7	0	93	–	
7/10	1514	9.4	80	27	35	12/40	8.5	9.0	–	2	.1	.3	100	10	1/4	7	0	93	–	
7/11	1623	9.5	82	27	33	10/36	8.5	8.8	–	2	.1	.3	100	8	1/4	8	0	92	–	
7/12	1623	9.5	78	27	33	10/36	8.5	9.0	–	2	.1	.3	100	8	1/4	8	0	92	–	
7/13	1623	9.5	75	26	30	8/28	8.5	9.4	–	2	.1	.2	100	8	1/4	8	0	92	–	
7/14	1623	9.5	68	22	22	6/18	8.5	10	–	2	.1	.2	100	8	1/4	8	0	92	–	
7/15	1617	9.5	55	22	15	4/12	8.5	10.8	–	3	.1	.3	100	8	1/4	8	0	92	–	
7/16	1617	9.5	56	22	16	4/12	8.5	11.0	–	3	.1	.3	100	8	1/4	8	0	92	–	
7/17	1617	9.5	52	20	18	3/14	8.5	11.4	–	3	.1		100	Tr	1/4	8	0	92	–	
7/18	1670	9.3	45	6	33	25/38	9.0	56.4	–	3	.4		300	320	1/4	7	0	93	–	
7/19	2008	9.4	60	10	23	20/56	10.0	20.4	–	3	.6		400	60	1/2	8	0	92	–	
7/20	2420	9.4	50	15	17	8/21	9.0	10.0	–	2	.3		300	20	1/4	7	0	93	–	
7/21	2848	9.7	50	19	13	6/21	9.0	5.5	–	2	.3		200	Tr	Tr	9	Tr	91	–	
7/22	3322	9.8	74	28	26	7/31	10.0	6.0	–	2	.4		200	Tr	Tr	9	1	90	–	
7/23	3750	9.9	51	25	18	7/16	9.0	5.6	–	2	.2		150	24	Tr	9	1	90	–	
7/24	3965	10.0	65	31	24	8/30	9.5	5.8	–	2	.4		175	8	Tr	12	1	87		
7/25	4009	10.1	85	33	32	10/35	9.5	5.2	–	2	.4		200	Tr	Tr	11	1	88	–	
7/26	4009	10.1	93	31	33	9/37	9.5	5.0	–	2	.3		1500	8	Tr	11	1	88	–	
7/27	4009	10.1	80	31	28	8/32	9.0	5.4	–	2	.3		1400	12	Tr	11	1	88	–	
7/28	4009	10.1	55	26	23	8/30	10.5	5.2	–	2	.5		1200	16	Tr	11	1	88	–	
7/29	4009	10.1	50	21	18	6/18	10.0	5.2	–	2	.5		1200	20	Tr	11	Tr	89	–	
7/30	4009	10.0	41	17	6	2/14	11.0	7.8	–	2	1.4		2800	80	Tr	10	Tr	90	–	
7/31	4230	9.9	47	20	13	3/16	11.0	6.0	–	2	1.9		10,000	40	Tr	10	Tr	90	–	
8/1	4424	10.1	47	27	8	2/15	11.5	5.8	–	2	2.0		8500	40	Tr	9	Tr	91	–	
8/2	4676	10.4	43	21	10	2/16	11.5	5.5	–	2	1.8		7000	32	Tr	12	Tr	88	–	
8/3	4975	10.3	47	28	10	3/14	11.0	5.2	–	2	1.3		5800	40	Tr	13	Tr	87	–	
8/4	5388	13.3	48	34	15	4/21	11.0	5.0	–	2	.9		5000	68	Tr	22	Tr	78	–	

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCK POINT DATE BAROID ENGINEER

CASING PROGRAM: 30 inch at 115 ft.; 20 inch at 1617 ft.; 13 3/8 inch at 3983 ft.; 9 5/8 inch at 9980 ft.; 7 5/8 inch at 9661 ft. to 12,814 ft.

TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND %	RETORT			CEC	REMARKS AND TREATMENT
1979	feet	lb/gal	Sec API ___°F	PV ___°F		10 sec/10 min	Strip Ω Meter Ω	ml API	HTHP ___°F	Cake 32nds	Pf	Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, me/ml	
8/5	5388	14.3	55	40	19	5/21	11.0	5.8	–	2	.8		4800	80	Tr	27	0	73	–	
8/6	5388	14.5	60	52	13	4/22	11.0	5.3	–	2	1.0		5000	92	Tr	28	0	72	–	
8/7	5400	14.5	58	52	17	4/20	11	5.2	–	2	1.0		5000	92	Tr	28	0	72	–	
8/8	5403	14.5	54	46	15	4/18	11	5.4	–	2	1.0		4800	90	Tr	28	0	72	–	
8/9		14.5	54	45	18	4/20	11	5.2	–	2	.7	1.7	5000	80	Tr	28	0	72	–	
8/10	5568	14.6	62	50	22	4/38	11	5.0	–	2	.6	1.6	4800	80	Tr	29	0	71	–	
8/11	5832	14.5	51	45	22	5/25	10.5	5.0	–	2	.5	1.2	4200	120	Tr	30	0	70	–	
8/12	5975	14.5	56	41	20	4/25	10.5	5.2	–	2	.5	1.5	6000	80	Tr	30	0	70	–	
8/13	6276	14.5	48	39	18	4/16	11.0	5.0	–	3	.5	2.0	6000	80	–	28	0	72	–	
8/14	6382	14.5	47	38	15	3/15	10.5	4.8	–	2	.5	1.5	6000	80	Tr	28	0	72	–	
	WELL	SUSPENDED	DUE																	
						TO	LABOR		DISPUTE											
10/17	6551	14.1	47	39	20	5/17	10.0	7.5	–	2	1.0	2.0	4000	200	Tr	28	0	72	–	
10/18	6551	14.5	48	35	11	3/19	10.0	7.5	–	2	1.5	3.0	3200	60	Tr	28	2	70	–	
10/19	6551	14.5	78	33	26	11/26	9.5	12.0	–	3	1.0	4.0	3700	280	Tr	32	1	77	–	
10/20	6551	14.1	130	52	45	15/25	10.0	9.0	–	3	1.0	3.0	4000	600	Tr	35	Tr	65	–	
10/21	6557	14.5	49	30	5	2/9	9.0	4.5	–	2	Tr	2.5	2000	400	Tr	30	Tr	70	–	
10/22	6731	14.5	46	27	8	3/15	9.0	5.0	–	2	.2	2.6	2200	120	0	28	Tr	72	–	
10/23	6853	14.5	52	29	11	3/16	9.0	6.0	–	2	.1	2.7	2300	600	0	29	Tr	71	–	
10/24	6950	14.6	52	28	13	5/15	9.0	5.5	–	2	.2	3.0	2200	300	Tr	29	Tr	71	–	
10/25	7110	14.6	50	30	16	6/19	9.0	6.5	–	2	Tr	3.5	1500	200	Tr	29	Tr	71	–	
10/26	7169	14.5	45	28	11	5/17	9.0	6.0	–	2	.2	3.2	1500	200	0	28	Tr	72	–	
10/27	7292	14.5	47	26	11	3.20	9.5	6.0	–	2	.3	3.2	1300	200	0	27	Tr	73	–	
10/28	7420	14.5	47	25	11	4/22	9.5	6.0	–	2	.3	3.1	1200	200	0	27	Tr	73	–	
10/29	7605	14.5	48	28	15	5/22	9.0	5.0	–	2	.2	3.0	1200	200	0	28	Tr	72	–	
10/30	7700	14.6	50	27	13	4/21	9.0	5.5	–	2	.2	3.2	1300	160	0	28	Tr	72	–	
10/31	7898	14.6	47	27	13	5/22	9.0	6.0	–	2	.2	3.0	1300	160	Tr	28	Tr	72	–	
11/1	8010	14.6	48	29	14	6/26	9.0	6.3	–	2	.2	3.1	1200	120	Tr	29	–	71	–	
11/2	8155	14.6	49	31	16	5/27	9.5	5.8	–	2	.2	3.5	1200	100	Tr	29	–	71	–	
11/3	8312	14.5	45	27	15	5/26	9.5	5.8	–	2	.5	3.8	1200	100	Tr	28	–	72	–	
11/4	8425	14.6	48	28	16	5/29	9.5	5.9	–	2	.6	3.2	1200	120	Tr	29	–	71	–	
11/5	8578	14.5	46	27	14	6/29	9.5	5.7	–	2	.4	3.0	1200	120	Tr	28	–	72	–	
11/6	8611	14.5	46	28	15	7/30	9.5	6.	–	2	.4	3.1	1200	100	Tr	28	–	72	–	
11/7	8719	14.5	46	28	15	6/31	9.0	6.2	–	2	.3	3.0	1200	100	Tr	28	–	72	–	
11/8	8815	14.5	45	27	16	5/32	9.5	6.0	–	2	.5	3.1	1200	120	Tr	29	–	71	–	

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCK POINT DATE MUD ENGINEER

CASING PROGRAM: 30 inch at 115 ft.
20 1617
13 3/8 inch at 3983 ft.
9 5/8 9980
7 5/8 inch at 9661 ft.
to 12 814
TOTAL DEPTH 15,611' ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY Sec API @ °F	VISCOSITY PV @ °F	Yp	GELS 10 sec / 10 min	pH Strip (1) Meter (2)	FILTRATION ml API	FILTRATE @ °F	Cake 32nds	FILTRATE ANALYSIS Pf	Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, ms/ml	REMARKS AND TREATMENT
11/9	8877	14.5	45	28	17	5/33	9.5	5.7	-	2	.4	3.0	1200	120	Tr	29	0	71	-	
11/10	8976	14.5	46	26	17	5/31	9.5	5.8	-	2	.48	3.2	1200	120	Tr	28	0	72	-	
11/11	9053	14.8	54	34	19	6/38	9.5	6.0	-	2	.42	3.0	1200	120	Tr	30	0	70	-	
11/12	9203	14.9	47	28	19	6/38	9.5	5.2	-	2	.42	3.7	1200	120	Tr	30	0	70	-	
11/13	9292	14.9	47	27	18	6/37	9.5	5.4	-	2	.4	3.4	1200	120	Tr	30	0	70	-	
11/14	9404	14.9	46	26	19	6/37	9.0	5.2	-	2	.3	3.1	1100	110	1/4	30	0	70	-	
11/15	9500	14.9	46	24	20	5/40	9.5	5.4	-	2	.4	3.0	1100	110	0	30	0	70	-	
11/16	9528	14.9	47	26	19	5/37	9.0	5.4	-	2	.3	3.0	1100	110	0	30	0	70	-	
11/17	9675	14.9	48	26	21	7/42	9.5	5.2	-	2	.4	2.8	1000	100	0	31	0	69	-	
11/18	9775	14.9	48	24	24	10/42	9.5	5.0	-	2	.4	2.8	1000	100	0	31	0	69	-	
11/19	9867	14.9	47	26	22	8/42	9.0	4.5	-	2	.3	2.8	900	100	0	31	0	69	-	
11/20	9984	14.9	45	23	20	6/38	9.5	5.4	-	2	.5	3.0	1000	100	0	30	0	70	-	
11/21	10004	14.9	47	22	24	6/40	9.5	5.0	-	2	.3	3.0	1000	100	0	30	0	70	-	
11/22	10004	14.4	55	22	15	4/32	9.0	5.5	-	2	.2	2.5	900	100	0	27	0	73	-	
11/23	10004	14.9	47	24	24	7/42	9.5	5.4	-	2	.2	3.0	1000	100	0	30	0	70	-	
11/24	10004	14.9	47	24	24	7/42	9.5	5.4	-	2	.2	3.0	1000	100	0	30	0	70	-	
11/25	10004	14.8	48	26	24	7/42	9.0	5.4	-	2	.3	3.0	1000	100	0	30	0	70	-	
11/26	10004	14.6	46	24	22	6/40	9.0	5.6	-	2	.3	3.0	900	80	0	30	0	70	-	
11/27	10004	14.8	43	16	10	3/10	11.5	6.0	-	2	1.2	3.0	1000	40	0	28	0	72	-	
11/28	10065	14.6	38	21	9	2/8	11.5	4.6	-	2	1.4	3.9	1000	40	Tr	26	0	74	-	
11/29	10090	14.5	42	24	11	2/14	11.0	4.4	-	2	1.2	2.6	1000	40	Tr	28	0	72	-	
11/30	10158	14.7	44	27	12	2/19	11.0	4.2	-	2	1.3	2.7	1000	40	Tr	28	0	72	-	
12/1	10266	14.7	44	29	12	3/19	11.0	4.2	-	2	1.1	2.2	900	40	Tr	30	0	70	-	
12/2	10337	14.8	44	28	10	3/14	11.0	4.4	-	2	1.0	2.1	900	40	Tr	30	0	70	-	
12/3	10445	14.8	44	27	11	3/20	11.0	4.4	-	2	1.0	1.9	900	40	Tr	30	0	20	-	
12/4	10534	15.0	44	26	12	2/11	10.5	4.4	-	2	.7	1.9	800	40	Tr	31	0	69	-	
12/5	10584	15.0	45	30	14	3/16	10.5	4.4	-	2	.7	1.8	800	40	1/2	31	0	69	-	
12/6	10689	15.2	47	34	16	3/19	10.0	4.2	-	2	.5	1.7	800	40	1/2	32	0	68	-	
12/7	10804	15.2	45	33	16	3/16	9.0	3.6	-	2	.2	.5	600	40	1/2	32	0	68	-	
12/8	10859	15.1	45	32	15	3/15	10.0	3.6	-	2	.5	1.8	500	40	1/2	32	0	68	-	
12/9	10883	15.1	47	32	15	3/15	10.0	3.6	-	2	.5	1.8	500	40	1/2	32	0	68	-	
12/10	10918	15.1	46	33	12	3/13	10.0	3.6	-	2	.4	.9	400	40	1/2	32	0	68	-	
12/11	10972	15.1	43	29	13	3/11	10.0	3.6	-	2	.5	1.9	400	40	1/2	32	0	68	-	
12/12	10995	15.2	46	34	17	4/12	10.0	3.8	-	2	.6	1.8	500	40	1/4	32	0	68	-	
12/13	11088	15.2	45	28	17	3/11	10.0	3.6	-	2	.6	1.8	800	60	1/2	32	0	68	-	

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCKPOINT DATE BAROID ENGINEER

CASING PROGRAM: 30 inch at 115 ft.
20 1617
13 3/8 inch at 3983 ft.
9 5/8 9980
7 5/8 inch at 9661 ft.
to 12,814

TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND	RETORT			CEC	REMARKS AND TREATMENT
1979/80	feet	lb/gal	Sec API @ °F	PV @ °F		10 sec/10 min	Strip Ø Meter Ø	ml API	HTHP @ °F	Cake 32nds	Pm	Pf/Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, me/ml	
12/14	11133	15.2	44	30	15	4/12	10.0	3.8	–	2	.7	1.8	900	60	1/4	32	0	68	–	
12/15	11142	15.2	48	31	17	4/12	10.0	3.8	–	2	.8	2.0	800	80	1/4	32	0	68	–	
12/16	11249	15.2	47	29	18	4/12	10.0	3.4	–	2	1.8	2.0	900	80	1/4	32	0	68	–	
12/17	11328	15.2	48	33	19	5/14	10.0	3.4	–	2	.9	2.1	900	80	1/4	32	0	68	–	
12/18	11328	15.2	48	30	19	4/14	10.0	3.5	–	2	.9	2.2	900	80	1/4	32	0	68	–	
12/19	11445	15.4	52	34	20	4/16	10.0	3.5	–	2	.9	2.1	900	120	1/4	33	0	67	–	
12/20	11520	15.5	54	36	21	5/16	10.0	3.2	–	2	.7	2.1	700	80	1/4	33	0	67	–	
12/21	11660	15.5	54	35	28	6/18	10.5	3.1	–	2	.9	2.4	700	60	1/4	34	0	66	–	
12/22	11727	15.7	58	33	25	5/16	10.0	3.1	–	3	1.0	2.9	900	80	1/2	34	0	66	–	
12/23	11823	15.7	61	36	26	5/18	10.0	3.1	–	3	.8	2.9	900	80	1/4	34	0	66	–	
12/24	11896	15.7	58	36	33	6/18	10.0	3.2	–	3	.8	3.1	800	40	1/4	34	0	66	–	
12/25	12011	15.9	64	36	23	6/18	10.0	3.0	–	3	.8	2.9	900	40	1/4	34	0	66	–	
12/26	12011	15.9	67	36	31	6/18	10.0	3.0	–	3	.8	3.1	900	40	1/4	34	0	66	–	
12/27	12041	15.9	62	33	23	6/18	10.0	3.0	–	3	.8	3.2	800	40	1/4	34	0	66	–	
12/28	12113	15.9	61	35	23	6/18	10.0	3.0	–	3	.7	3.1	1000	60	1/4	34	0	66	–	
12/29	12113	15.9	78	42	31	6/24	10.0	3.2	–	3	.9	2.9	900	60	1/4	32	1	67	–	
12/30	12113	15.9	72	38	31	6/20	10.0	3.0	–	3	.6	2.9	900	60	1/4	32	1	67	–	
12/31	12113	15.9	70	38	24	6/20	10.0	2.9	–	3	.5	2.9	1000	60	1/4	33	1	66	–	
1/1	12113	15.9	74	39	25	6/20	10.0	2.9	–	3	.7	3.1	1000	60	1/4	33	1	66	–	
1/2	12113	15.8	68	37	23	6/20	10.5	2.7	–	2	.9	3.4	900	60	3/4	39	Tr	66	–	
1/3	12115	15.9	60	36	21	6/18	10.0	2.6	–	2	.6	3.4	800	60	1/2	34	Tr	66	–	
1/4	12195	15.9	59	37	27	8/17	10.0	2.4	–	2	.5	3.2	900	110	1/4	35	Tr	65	–	
1/5	12202	15.9	63	37	30	8/18	10.0	2.4	–	2	.5	3.2	900	100	1/4	35	Tr	65	–	
1/6	12202	15.8	63	37	30	8/20	10.0	2.5	–	2	.4	3.1	800	100	1/4	35	Tr	65	–	
1/7	12278	15.9	54	34	20	6/16	10.0	2.4	–	2	.6	3.1	1000	110	1/4	35	Tr	65	–	
1/8	12343	15.9	56	35	20	6/18	10.0	2.2	–	2	.6	3.1	1000	120	1/4	35	Tr	65	–	
1/9	12374	15.9	53	36	20	5/20	10.0	2.2	–	2	.7	3.0	900	120	1/4	35	Tr	65	–	
1/10	12456	15.9	49	37	23	4/16	10.5	2.0	–	2	.2	3.1	900	120	1/4	36	Tr	64	–	
1/11	12526	15.9	52	38	14	4/14	10.0	2.2	–	2	.2	2.8	800	110	1/4	36	Tr	64	–	
1/12	12575	16.0	52	39	16	4/14	10.0	2.0	–	2	.2	2.8	800	110	1/4	36	Tr	64	–	
1/13	12635	16.0	52	36	19	4/16	10.0	2.0	–	2	.2	2.8	800	110	1/4	36	Tr	64	–	
1/14	12708	16.2	55	40	23	5/18	10.0	2.2	–	2	.2	3.0	800	110	1/4	37	Tr	63	–	
1/15	12766	16.2	56	38	19	5/16	9.5	2.3	–	2	.2	3.0	800	110	1/4	37	Tr	63	–	
1/16	12796	16.2	55	38	18	4/13	9.5	2.2	–	2	.2	3.0	700	80	1/4	37	Tr	63		500 units of background gas.
1/17	12814	17.0	65	42	30	6/20	9.5	2.4	–	2	.2	3.2	700	80	1/4	42	Tr	58	–	Hole sloughing.

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 15 RNG 1W

CASING PROGRAM: 30 inch at 115 ft.
20 inch at 1617 ft.
13 3/8 inch at 3983 ft.
9 5/8 inch at 9980 ft.
7 5/8 inch at 9661 ft. to 12,814 ft.

STOCKPOINT DATE BAROID ENGINEER TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND	RETORT			LCM	REMARKS AND TREATMENT
1980	feet	lb/gal	Sec API @ °F	PV @ °F		10 sec/10 min	Strip Cl Meter Cl	ml API	HTHP @ °F	Cake 32nds	Pm	Pf/Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, ms/ml	
1/18	12814	17.0	70	46	26	6/18	9.5	2.2	-	2	.3	3.0	700	80	1/4	42	0	58		Conditioning hole for logs.
1/19	12814	17.0	52	36	18	4/13	9.0	2.0	-	2	.2	2.8	700	80	1/4	38	0	62		Log hung up on bridge.
1/20	12814	17.0	58	40	19	4/16	10.0	2.4	-	2	.3	5.3	700	Tr	1/4	39	0	61		Pre-treating for cement.
1/21	12814	17.0	62	41	19	4/20	10.0	2.6	-	2	.3	5.3	700	Tr	1/4	39	0	61		
1/22	12814	17.0	51	28	13	4/12	10.0	2.4	-	2	.3	5.2	700	Tr	1/4	38	0	62		Running 7 5/8" casing.
1/23	12814	16.9	62	36	18	4/16	11.0	2.5	-	2	1.0	3.0	700	40	0	38	0	62		
1/24	12814	16.8	54	32	12	4/12	11.0	2.5	-	2	.9	5.0	700	Tr	Tr	37	0	63		
1/25	12814	17.0	53	34	12	4/11	11.0	2.7	-	2	1	4.0	700	50	1/4	37	0	63		
1/26	12814	17.0	52	34	12	4/10	11.0	2.7	-	2	.9	4.5	700	Tr	Tr	37	0	63		
1/27	12832	17.0	55	34	14	4/12	11.5	3.0	-	2	1.2	3.0	700	200	Tr	37	0	63		
1/28	12879	17.0	48	31	8	3/6	11.0	3.5	-	2	1.2	3.5	800	Tr	Tr	37	0	63		
1/29	12975	17.0	48	34	9	2/5	11.5	4.2	-	2	1.3	4.0	800	80	Tr	38	0	62		
1/30	13015	17.0	48	33	9	2/5	11.0	4.0	-	2	1.2	4.0	800	Tr	Tr	38	0	62		
1/31	13088	16.9	50	30	8	2/5	11.0	3.8	-	2	1.2	4.0	800	40	Tr	37	0	63		
2/1	13175	16.9	49	30	8	3/6	11.0	3.8	-	2	1.2	4.0	800	Tr	Tr	37	0	63		
2/2	13222	16.9	51	29	8	2/5	11.0	3.8	-	2	1.2	4.0	800	Tr	Tr	36	0	64		
2/3	13237	17.7	50	35	9	2/5	11.0	3.8	-	2	1.2	4.0	900	Tr	1/2	41	0	59		
2/4	13237	18.3	50	36	8	2/7	11.0	3.8	-	2	1.1	4.0	900	Tr	1	41	0	59		
2/5	13245	18.3	52	39	9	2/7	11.0	4.0	-	2	1.1	4.0	900	Tr	3/4	42	0	58		
2/6	13350	18.3	54	37	10	3/10	11.0	4.0	-	2	.8	3.5	900	Tr	1/2	41	0	59		
2/7	13400	18.3	52	38	8	3/11	11.0	3.8	-	2	.8	3.5	900	Tr	3/4	41	0	59		
2/8	13516	18.3	53	34	11	4/13	11.0	3.6	-	2	.7	3.2	900	Tr	3/4	42	0	58		
2/9	13570	18.3	53	32	10	3/10	10.5	3.6	-	2	.6	3.0	800	Tr	1/2	42	0	58		
2/10	13680	18.3	51	30	9	4/10	11.0	3.8	-	2	.8	3.0	800	Tr	1/2	41	0	59		
2/11	13763	18.3	52	30	8	4/9	10.5	4.0	-	2	.7	3.0	800	0	1/2	41	0	59		
2/12	13820	18.3	51	32	10	3/10	11.0	3.6	-	2	.9	3.0	800	0	1/2	42	0	58		
2/13	13900	18.3	50	30	10	4/11	10.5	4.0	-	2	.6	3.0	900	0	3/4	42	0	58		
2/14	13946	18.3	53	33	11	4/11	11.0	4.0	-	2	.8	3.0	900	0	3/4	43	0	57		
2/15	14027	18.3	49	40	13	3/10	10.0	3.4	-	2	.6	2.8	900	0	1/4	42	0	58		
2/16	14086	18.3	53	48	18	4/16	11.0	3.8	-	2	.8	3.0	900	0	1/4	42	0	58		
2/17	14150	18.3	60	52	32	8/22	9.5	3.8	-	2	.7	2.8	900	0	1/4	43	0	57		
2/18	14236	18.3	61	44	30	8/32	11.2	4.0	-	2	1.4	4.8	650	0	1/4	42	0	58		
2/19	14297	18.3	58	46	30	12/22	10.2	4.2	-	2	1.1	4.0	650	0	1/4	42	0	58		
2/20	14345	18.3	68	46	44	14/40	10.2	4.8	-	2	1.9	4.9	650	0	1/4	42	0	58		
2/21	14455	18.3	48	43	21	4/20	10.0	4.6	-	2	1.3	4.6	650	0	1/4	42	0	58		

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCKPOINT DATE BAROID ENGINEER

CASING PROGRAM: 30 inch at 115 ft.
20 1617
13 3/8 inch at 3983 ft.
9 5/8 9980
7 5/8 inch at 9661 ft.
to 12,814

TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND	RETORT			CEC	REMARKS AND TREATMENT
1980	feet	lb/gal	Sec API @ °F	PV @ °F		10 sec / 10 min	Strip Cl Meter Cl	ml API	HTHP @ °F	Cake 32nds	pf	Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, me/ml	
2/22	14544	18.3	52	46	20	5/22	10.2	4.8	–	2	2.0	6.8	500	0	1/4	42	0	58		
2/23	14553	18.3	79	50	34	15/44	19.0	5.4	–	2	1.3	5.0	500	0	1/2	42	0	58		
2/24	14607	18.3	52	30	10	4/17	10.1	5.6	–	2	1.5	6.0	500	0	1/2	41	0	59		
2/25	14657	18.3	53	30	10	4/18	10.2	4.8	–	2	1.5	4.8	500	0	1/2	41	0	59		Started lime treatments
2/26	14730	18.3	52	31	11	3/19	10.8	4.8	–	2	1.5	6.5	500	0	1/2	42	0	58		
2/27	14778	18.3	46	30	6	3/8	10.5	4.0	–	2	1.5	6.0	500	0	1/4	41	0	59		
2/28	14830	18.3	50	29	8	3/10	10.5	4.8	–	2	1.5	4.0	500	0	1/4	41	0	59		
3/1	14933	18.3	62	30	15	5/26	9.9	4.2	–	2	1.0	6.0	600	0	1/2	41	0	59		
3/2	15012	18.3	51	30	10	3/12	10.2	3.5	–	2	.8	4.5	600	0	1/2	41	0	59		
3/3	15073	18.3	50	30	10	3/11	11.0	3.6	–	2	1.0	4.0	600	0	1/4	41	0	59		Mud on bottoms up clabbered; treated with Bichromate
3/4	15109	18.4	54	31	9	4/16	10.1	4.4	–	2	.5	4.0	600	0	1/2	42	0	58		
3/5	15185	18.4	50	30	10	3/12	10.4	3.8	–	2	.8	4.0	600	0	1/4	41	0	59		
3/6	15257	18.4	48	30	7	4/12	10.1	3.6	–	2	.5	3.5	600	0	1/4	42	0	58		
3/7	15275	18.4	55	31	9	4/16	10.1	3.8	–	2	.5	3.5	600	0	1/2	42	0	58		
3/8	15345	18.4	47	29	6	3/9	10.3	3.9	–	2	.5	3.5	600	0	1/2	42	0	58		
3/9	15400	18.4	52	31	9	3/14	10.6	3.8	–	2	.5	3.5	600	0	1/2	43	0	57		
3/10	15457	18.4	55	29	9	3/17	10.8	3.8	–	2	.5	4.0	600	0	1/2	42	0	58		
3/11	15537	18.4	49	29	8	3/10	10.6	3.6	–	2	.4	4.0	600	0	1/2	42	0	58		
3/12	15537	18.4	50	29	8	3/10	10.5	3.6	–	2	.5	4.0	600	0	1/2	42	0	58		
3/13	15580	18.4	48	27	5	3/6	9.8	3.6	–	2	0	3.5	600	0	1/2	42	0	58		
3/14	15627	18.4	51	29	8	4/10	10.4	3.6	–	2	.4	3.5	600	0	1/2	42	0	58		
3/15	15627	18.4	46	27	5	3/6	10.1	4.0	–	2	.3	3.5	600	0	1/2	41	0	59		
3/16	15627	18.4	58	29	7	3/10	9.8	4.0	–	2	0	4.0	600	0	1/2	42	0	58		
3/17	15612	18.4	55	29	7	3/10	9.5	4.0	–	2	0	4.0	600	0	1/2	42	0	58		
3/18	15612	18.4	46	27	6	3/6	10.0	4.2	–	2	.2	4.0	600	0	1/2	42	0	58		
3/19	15612	18.4	65	30	9	3/10	10.4	3.8	–	2	.5	3.0	600	0	1/2	42	0	58		
3/20	15612	18.4	52	30	9	3/10	10.0	3.6	–	2	.3	3.0	600	0	1/2	42	0	58		
3/21	15612	18.4	58	45	10	4/14	10.5	3.8	–	2	.3	3.3	600	0	1/2	42	0	58		
3/22	15612	18.6	55	48	12	4/15	10.2	3.7	–	2	.5	3.2	600	Tr	1/2	42	0	58		
3/23	15612	18.6	54	45	12	4/13	10.0	4.1	–	2	.2	3.7	600	80	1/2	42	0	58		
3/24	15612	18.6	50	46	12	3/13	10.6	4.0	–	2	.4	3.3	600	120	3/4	42	0	58		
3/25	15612	18.6	49	40	10	3/12	10.4	4.0	–	2	.3	3.1	600	120	3/4	42	0	58		
3/26	15612	18.6	49	45	12	3/10	10.7	3.8	–	2	.5	2.9	600	160	3/4	42	0	58		
3/27	15612	18.6	52	50	12	3/11	10.4	3.8	–	2	.4	2.7	600	200	3/4	42	0	58		
3/28	15612	18.6	52	45	10	3/11	10.4	3.9	–	2	.5	2.7	600	200	3/4	42	0	58		

ARCTIC DRILLING SERVICES

COMPANY Husky Oil NPR Operations, Inc. STATE Alaska

WELL Seabee Test Well No. 1 COUNTY North Slope Borough

CONTRACTOR Nabors Alaska Drilling, Inc. LOCATION NPRA SEC 5 TWP 1S RNG 1W

STOCKPOINT _____ DATE _____ BAROID ENGINEER _____

CASING PROGRAM: 30 inch at 115 ft.
20 1617
13 3/8 inch at 3983 ft.
9 5/8 9980
7 5/8 inch at 9661 ft.
to 12,814

TOTAL DEPTH 15,611' ft.

DATE	DEPTH	WEIGHT	VISCOSITY		Yp	GELS	pH	FILTRATION			FILTRATE ANALYSIS				SAND	RETORT			CEC	REMARKS AND TREATMENT
1980	feet	lb/gal	Sec API @ °F	PV @ °F		10 sec/10 min	Strip Cl Meter Cl	ml API	HTHP @ °F	Cake 32nds	Pf	Mf	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %	Mud, me/ml	
3/29	15612	18.6	53	28	4	1/5	10.8	5.0	-	2	.5	2.5	600	200	3/4	42	0	58		
3/30	15600	18.6	60	30	10	3/17	11.0	4.9	-	2	.7	2.7	600	0	1/2	42	0	58		
3/31	15600	18.6	55	30	11	2/11	11.0	5.0	-	2	.7	2.7	600	0	1/2	43	0	57		
4/1	15600	18.6	50	29	4	2/17	10.8	4.5	-	2	.7	2.5	600	Tr	3/4	43	0	57		
4/2	15600	18.6	52	29	7	3/11	10.6	4.5	-	2	.6	3.0	600	Tr	1/2	43	0	57		
4/3	15600	18.4	45	28	5	2/7	10.6	4.8	-	2	.5	2.5	600	Tr	1/2	43	0	57		
4/4	15580	18.6	46	29	5	2/7	10.5	4.9	-	2	.5	3.0	600	Tr	1/2	43	0	57		
4/5	13800	18.5	45	30	6	2/9	10.3	5.4	-	2	.5	3.0	600	200	1/2	43	0	57		
4/6	8450	18.3	58	32	18	3/30	12.5	6.5	-	3	2.0	0	600	0	3/4	44	0	56		
4/7	8450	14.5	40	24	4	2/2	12.3	8.5	-	2	1.8	0	600	400	1/2	25	0	75		
4/8	8450	14.5	41	30	5	2/5	12.3	7.0	-	2	2.0	0	600	400	1/2	25	0	75		
4/9	5341	14.5	43	26	3	1/4	12.3	7.4	-	2	1.8	0	600	400	1/4	26	0	74		
4/10	5341	14.4	42	28	4	1/4	11.8	7.2	-	2	1.3	2.5	550	400	Tr	26	0	74		
4/11	5000	11.8	41	21	5	1/5	10.8	8.4	-	2	1.3	1.6	500	180	Tr	18	0	82		
4/12	5000	9.7	39	9	2	1/8	9.8	10.2	-	2	.3	.6	250	40	Tr	11	0	89		
4/13	2750	9.7	38	10	5	3/13	10.0	10.4	-	2	.3	.5	250	38	Tr	11	0	89		
4/14	1478	10.6	39	17	5	4/12	10.0	10.4	-	2	.3	.6	250	40	Tr	13	0	87		Arctic packed; plugged and and abandoned

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HUGHES BIT RECORD

SHEET 1 OF

FILE NUMBER

COUNTY	FIELD	STATE	X IF OFFSHORE	SECTION	TOWNSHIP	RANGE	OPERATOR	X (1)
North Slope Borough	National Petroleum Reserve in Alaska	Alaska		5	1 South	1 West	Husky Oil NPR Operations	

CONTRACTOR	X (2)	RIG NO	LOCATION	WELL NO.	SPUD	LS	INTER	TOOL DEPTH DATE	TOOL PUSHER
Nabors Alaska Drilling		25	Seabee Test Well	1					

TOOL JOINTS	GIVE SIZE & TYPE	O.D.	DRILL COL.	NO	O.D.	I.D.	PUMPS	LINER	DRAWWORKS & POWER	FUEL	WATER
	1 2	O.D.					1 2				

SALESMAN	AREA	STOCKPOINT NO.	DO NOT USE	STATE	ZONE	COUNTY	CONTRACTOR	OPERATOR	DATE	PURCHASER

DO NOT USE MFR	DO NOT USE TYPE	DO NOT USE JC	NO	SIZE	MAKE	TYPE	JET 32ND IN	SERIAL	DEPTH OUT	FEET	HOURS	SHOCK TOOL	FT/HR	ACCUM DRLG. HRS	WT. 1000 LBS	RPM	VERT DEV.	PUMP PRESS	SPM 1	SPM 2	MUD WT	MUD VIS.	MUD W.L.	DULL T	DULL B	DULL G	DULL OTHER.	FORMATION CALL DATES REMARKS
			1	17½	HTC	OSC3AJ	3-16	PJ392	512	397	21		18.9	26.25	25	150		1500	81	41	9.4	45	10	4	4	I		
			2	17½	HTC	OSC3AJ	3-16	PJ192	1084	572	21.75		26.2	41	25	140		1500	81	41	9.6	40	9	4	5	I		
			3	17½	HTC	OSC3J	3-16	HT685	1297	213	13.5		15.7	62.25	30	165		1500	81	41	9.6	60	8	4	4	I		
			4	17½	HTC	OSC3J	3-16	HPQ17	1623	326	16.5		19.7	70.50	30	150		1500	81	41	9.7	82	8	4	4	I		
		HO1	26		Grnt		3/4"	M6980	734	619	26		23.8		25	125		900	81	41	9.5	50	8.2	5	7	I		
		HO4	26		Grnt		3/4"	22369	1388	109	18.25		5.9		30	135		1100	86	42	9.4	80	9	4	3	I		
		HO5	26		Grnt		3/4"	22369	1587	199	21.5		9.2		30	140		1100	86	42	9.5	82	8.8	7	8	1/2		
		HO6	26		Grnt		1"	101664	1623	36	4.5		8		30	140		1100	86	42	9.5	82	8.8	1	1	I		
			5	17½	HTC	OSC3AJ	3-16	SC525	1680	57	5.25		10.8	76.25	20	80		1400	86	42	9.3	45	32	2	1			
			6	17½	HTC	X3A	2-8 1-15	SC528	2465	785	36		21.8	129	30	150		1500	85	46	9.4	50	10	4	4	I		
			7	17½	HTC	X3A	3-16	SC216	2848	383	16.25		23.5	145.25	30	150		1400	74	40	9.7	50	5.5	3	3	I		
			8	17½	HTC	X3A	3-16	SC981	4009																			
			9	12¼	Sec	54TJ	3-12	770367	4287	278	18.25		9.8	173.5	15	150		2000	120		9.9	50	6	5	4	I		
			10	12¼	HTC	X3A	3-12	PM710	4676	389	17.25		22.5	196	42	140		2100	120	10	10.1	48	6	3	3	I		
			11	12¼	HTC	X3A	3-12	PM714	5388	712	25.75		27.6	221.75	40	120		2000	118	10	10.1	48	5	2	2	I		
		CH1	8½		Dia	MC201		9W1827	5402	12	2.25		5.3	225	18	70		1380	83	14	14.5	58	5.2	G	O	O		
			12	12¼	HTC	X3A	1-13 2-12	PM732	5925	523	48		10.8	273	45	120		2280	106	14	14.5	56	5.2	2	8	I		
			13	12¼	HTC	X3A	2-12 1-13	PM849	6345	420	3.8		1	311	40	120		2260	105	14	14.5	47	4.8	4	6	I		
			14	12¼	HTC	X3A	2-12 1-13	RB520	6541	196	24.25		8	335.25	40	130		2375	105	14	14.5	50	4.8	4	5	I		
		CH2	8½		Dia	MC201		8W1746	6551	10	3.25		3	338.50	15	70		1200	87	14	14.4	43	4.8	G	O	O		
			15	12¼	HTC	X3A	2-12 1-13	RW459	Reamed core hole; suspended well.																			
			16	12¼	HTC	OSC1G	Open	PF813	6557		25.25			Drilled cement										2	2	I		

HTC 308 K

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HUGHES BIT RECORD

PRINTED IN U.S.A. SHEET 1 OF

COUNTY	FIELD	STATE	X IF OFFSHORE	SECTION	TOWNSHIP	RANGE	OPERATOR	X (1)	FILE NUMBER
North Slope Borough	National Petroleum Reserve in Alaska	Alaska		5	1 South	1 West	Husky Oil NPR Operations		

CONTRACTOR	X (2)	RIG NO.	LOCATION	WELL NO.	SPUD	US	INTER	TOOL DEPTH DATE	TOOL PUSHER
Nabors Alaska Drilling		25	Seabee Test Well	1					

TOOL JOINTS	GIVE SIZE & TYPE		O.D.	DRILL COL.	NO	O.D.	I.D.	PUMPS	1.	LINER	DRAWWORKS & POWER	FUEL	WATER
		1											
		2							2				

SALESMAN	AREA	STOCKPOINT NO.	DO NOT USE	STATE	ZONE	COUNTY	CONTRACTOR	OPERATOR	DATE	PURCHASER

DO NOT USE MFR	TYPE	WC	NO	SIZE	MAKE	TYPE	JET 32ND IN	SERIAL	DEPTH OUT	FEET	HOURS	SHOCK TOOL	FT/HR	ACCUM DRLG HRS	WT 1000 LBS	RPM	VERT DEV	PUMP PRESS	SPM 1	SPM 2	MUD WT	MUD VIS.	MUD W.L.	DULL T	DULL B	DULL G	DULL OTHER	FORMATION CALL DATES REMARKS
			17	12¼	HTC	X1G	3-12	ZJ961	6852	295	40			411.5	40	110		2600	110		14.5	52	6	3	3	I		
			18	12¼	Smi	2JS	1-11 2-12	JE914	6869	17	4			415.5	40	110		2750	112		14.6	52	5.5	1	1	I		
			19	12¼	HTC	X3A	1-11 2-12	PM882	7166	297	43.25			458.75	40	100		2500	105		14.5	45	6	4	3	I		
			20	12¼	Reed	Y11J	1-11 2-12	164445	7292	126	21.5			480.25	40	110		2500	107		14.5	47	6	3	7	I		
			21	12¼	HTC	X3A	1-11 2-12	PM718	7660	368	47			527.25	50	115		2500	107		14.6	50	5.5	4	8	I		
			22	12¼	Smi	SDS	1-11 2-12	AH8447	7937	277	35.50			562.75	50	110		2500	107		14.6	48	6.1	4	8	I		
			23	12¼	Smi	SDS	1-11 2-12	AH8450	8155	218	29			591.75	50	110		2500	107		14.6	48	5.8	4	8	I		
			24	12¼	Smi	SDS	1-11 2-12	AI3698	8392	237	27			618.75	60	110		2500	107		14.6	48	5.9	4	7	I		
			25	12¼	Smi	SDS	1-11 2-12	AK3005	8592	200	31.50			650.25	60	110		2500	105		14.6	46	6.1	5	8	I		
		RR	18	12¼	Smi	J2S	1-11 2-12	EJ419	8609	17	4.50			654.25	60	80		2500	105		14.6	46	6.1	GR	EN			
			26	12¼	Smi	SDS	1-11 2-12	AK3004	8719	110	20.25			674.75	60	108		2500	107		14.5	46	6.2	5	7	I		
			27	12¼	Smi	SDS	1-11 2-12	AK2649	8877	160	32.50			707.25	60	80		2500	105		14.5	45	5.7	4	7	I		
			28	12¼	Smi	SDT	1-11 2-12	PV578	9038	161	27.50			734.25	60	80		2500	105		14.8	54		6	6	I		
			29	12¼	Hugh	X1G	1-11 2-12	LK070	9280	242	35.25			769.50	64	59		2600	105		14.9	47	5.4	6	6	I		
		RR	18	12¼	Smi	2JS	3-12	EJ419	9528	248	53			822.50	66			2500	105		14.9	47	5.4	3	7	I		
			30	12¼	Hugh	X1G	3-12	PM234	9681	153	24.50			847	57	77		2500	105		14.9	48	5.0	4	4	I		
			31	12¼	Hugh	X1G	3-12	PM285	9867	186	26			873	52	74		2500	105		14.9	47	4.5	4	3	I		
			32	12¼	Hugh	X1G	3-12	ZZ661	10,004	137	27.50			900.50	55	75		2500	105		14.9	47	5.0	5	1	I		
		RR	32	12¼	Hugh	X1G	14 15 16	ZZ661	10,004	–	–			900.50	–	–		1700	105		14.9	47	5.4	Cl	ea	ni	ng out to log.	
			33	8½	Hugh	OSC1G	3-12	NO221			3			903.50	10/35	50/80		1500	105		14.8	43	6.0					
			34	8½	Hugh	X1G	9 11 10	PK945	10,068	64	15.25			918.75	25/30	50		1340	68		14.5	42	4.4	6	2	I		
		CH3		8½	Chri	Mc201		8W1746	10,098	30	10.50			929.25	43	60		2400	123		14.7	44	4.2					

HTC 308 R

BIT CONDITION CODE: RP - REPAIRED RR-RERUN

HUGHES BIT RECORD

PRINTED IN U.S.A. — SHEET 1 OF — FILE NUMBER

COUNTY	FIELD	STATE	X IF OFFSHORE	SECTION	TOWNSHIP	RANGE	OPERATOR	X (1)
North Slope Borough	National Petroleum Reserve in Alaska	Alaska		5	1 South	1 West	Husky Oil NPR Operations	

CONTRACTOR	X(2)	RIG NO	LOCATION	WELL NO	SPUD	MD	ENTER	TOOL DEPTH DATE	TOOL PUSHER
Nabors Alaska Drilling		25	Seabee Test Well	1					

TOOL	GIVE SIZE & TYPE	O.D.	DRILL	NO.	O.D.	I.D.	JETS	LINER	DRAWWORKS & POWER	FUEL	WATER

SALESMAN	AREA	STOCKPOINT NO.	DO NOT USE	STATE	ZONE	COUNTY	CONTRACTOR	OPERATOR	DATE	PURCHASER

DO NOT USE MFR	DO NOT USE TYPE	DO NOT USE MC	NO	SIZE	MAKE	TYPE	JET 32ND IN	SERIAL	DEPTH OUT	FEET	HOURS	SHOCK TOOL	FT/HR	ACCUM DRLG. HRS.	WT. 1000 LBS	RPM	VERT DEV	PUMP PRESS	SPM 1	SPM 2	MUD WT	MUD VIS.	MUD W.L.	DULL. COND. T	DULL. COND. B	DULL. COND. G	DULL. COND. OTHER.	FORMATION CALL DATES REMARKS
			35	8½	Hugh	J22	3-9	NT741	10,292	194	40			969 25	40/ 43	60/80		2000	110	15	9.8	44	4.4	3	4	I		
			36	8½	Reed	FP51	3-9	891238	10,534	242	55.25			024 50	43/ 44	55/80		2100	110	15	9.0	44	4.4	1	2	I		
			37	8½	Hugh	X1G	2-9 1-8	PH721	10,808	274	59			083 50	30/ 32	70/75		2200	112	15	9.2	45	3.6	7	5	I		
			38	8½	Hugh	X1G	2-9 1-8	PH735	10,870	62	14.50			098	23/ 25	50/85		1175	70	15	9.1	45	3.6	1	1	I		
			39	8½	Hugh	X1G	2-9 1-8	PK048	10,983	100	40.50			138 50	17	77		2300	110	15	9.2	46	3.8	3	3	I		
			40	8½	Hugh	X3A	2-9 1-8	AT928	11,133	150	44			187 50	24	80		2300	110	15	9.2	44	3.8	4	4	I		
			41	8½	Hugh	X3A	2-9 1-8	MK041	11,328	195	49			231 50	24	80		2200	110	15	9.2	48	3.4	6	8	I		
			42	8½	Hugh	X1G	2-9 1-8	HZ226	11,520	192	36.75			268 25	20	80		2200	110	15	9.5	54	3.2	6	6	I		
			43	8½	Hugh	X1G	2-9 1-8	VF763	11,666	148	22			290 25	20	80		2250	112	15	9.7	58	3.1	4	5	I		
			44	8½	Hugh	X1G	2-9 1-8	TB959	11,823	157	32			322 25	20	80		2250	112	15	9.7	61	3.1					
			45	8½	Hugh	X1G	2-9 1-8	NR508	12,011	188	37.25			350 50	22	90		2250	112	15	9.7	61	3.0	6	8	1/16		
			45	8½	Chri	MC20I	12, 14 18	9W2566	12,041	30	7.50			367	20	60		1700	70	15	9.9	62	3.0	GOOD				
			46	8½	Hugh	X1G	2-9 1-8	WD398	12,113	72	17.50			384 50	20	90		2300	75	15	9.9	74	2.9	4	2	I		
			47	8½	Hugh	X1G	2-9 1-8	WD399	12,202	89	27			411 50	22/ 24	70/80		2200	111	15	9.9	63	2.4	4	4	I		
			48	8½	Hugh	J22	1-8 2-9	KH208	12,374	172	52			463 50	40	50		2200	112	15	9.9	53	2.2	2	5	I		
			49	8½	Hugh	J22	1-8 2-9	BK321	12,575	201	66			529 50	40	50		2200	121	16	0.0	52	2.0	4	4	I		
			50	8½	Hugh	J22	1-8 2-9	KH197	12,766	191	61			590 50	40	50		2300	108	16	9.2	56	2.3	3	5	I		
			51	8½	Hugh	J22	2-9 1-8	407BK	12,814	48	13.50			604	40	50		2400	105	17		70	2.2	1	2	I		
			52	8½	Hugh	OSC1GJ	3-12	ND195	9,661	85	6.50			610 50	15	70		2100	105	17		53	2.7	Teeth Broken				Drilled cement
			53	6¼	Smi	DGJ	Out	5654	12,734	48	2			612 50	10	70		2100	127	16	9.9	62	2.5	1	4	I		
			54	6¼	Hugh	OSC1GJ	3-12	NJ784	12,734	0	0			612 50										Teeth Broken			Circulated	
			55	6¼	Hugh	OSC1GJ	3-9	JZ479	12,879	65	18			630 50	10/ 14	70		2500	88	17	0.0	48	3.5	7	7	I		

NTC 308 K

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HUGHES BIT RECORD

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COUNTY	FIELD	STATE	X IF OFFSHORE	SECTION	TOWNSHIP	RANGE	OPERATOR	X (1)
North Slope Borough	National Petroleum Reserve in Alaska	Alaska		5	1 South	1 West	Husky Oil NPR Operations	

CONTRACTOR	X (2)	RIG NO	LOCATION	WELL NO	SPUD	DS	INTER	TOOL DEPTH DATE	TOOL PUSHER
Nabors Alaska Drilling		25	Seabee Test Well	1					

TOOL JOINTS	GIVE SIZE & TYPE	O.D.	DRILL COL.	NO.	O.D.	I.D.	PIN BOX	LINER	DRAWWORKS & POWER	FUEL	WATER
	1						1				
	2						2				

SALESMAN	AREA	STOCKPOINT NO.	DO NOT USE	STATE	ZONE	COUNTY	CONTRACTOR	OPERATOR	DATE	PURCHASER

DO NOT USE MFR	DO NOT USE TYPE	DO NOT USE WC	NO	SIZE	MAKE	TYPE	JET 32ND IN	SERIAL	DEPTH OUT	FEET	HOURS	SHOCK TOOL	FT/HR	ACCUM DRLG. HRS.	WT. 1000 LBS	RPM	VERT. DEV.	PUMP PRESS	SPM 1	SPM 2	MUD WT.	MUD VIS.	MUD W.L.	DULL T	DULL B	DULL G	DULL OTHER	FORMATION CALL DATES REMARKS
			56	6¼	Smi	F2	3-9	AL7915	13,015	136	32.75			1663 75	13/15	65		2100	76		17.0	48	4.0	2	2	I		
			57	6¼	Smi	F2	3-9	ML8201	13,207	192	50.25			1713 50	15	65		1900	86		16.9	51	3.8	4	6	I		
		OH	6	6¼	Chri	CDP		OW1745	13,237	30	6.50			1720	15	40		1600	88		16.9	51	3.8					
			58	6¼	Smi	F2	3-9	AL7637	13,351	114	24.25			1048 75	15	65		1950	72		18.3	54	4					
			59	6¼	Smi	F2	3-9	AL6341	13,535	184	39.50			1088 25	15	65		1900	70		18.3	53	3.6	3	5	I		
			60	6¼	Smi	F2	3-9	AL7914	13,763	228	49.50			1137 75	15	65		1950	72		18.3	52	4	3	5	I		
			61	6¼	Hugh	J-33	3-9	VT111	13,946	183	51.50			1189 25	15	65		2000	71		18.3	53	4	3	5	I		
			62	6¼	Hugh	J-33	3-9	VR165	14,086	140	44.50			1233 75	15	65		2000	73		18.3	53	3.8	3	5	I		
			63	6¼	Smi	F-2	3-9	AP9927	14,297	211	57.75			1291 50	15	65		2250	71		18.3	58	4.2	3	5	I		
			64	6¼	Smi	F-2	3-9	AP9936	14,553	256	59			1350 50	5/15	40/65		2200	72		18.3	79	5.4	5	8			
			65	6¼	Hugh	OSC1GJ	3-9	MJ770	14,577	24	3.25			1353 75	15	45/50		2400	86		18.3	52	5.6	1	4	I		
		RR OH	3	6¼	Chri	MC20		OW2745	14,607	30	7			1360 75	12/18	50		2400	86		18.3	52	5.6					
			66	6¼	Smi	F2	3-9	AP9926	14,778	171	44.50			1405 25	10/12	65/68		1950	69		18.3	46	4					
			67	6¼	Hugh	J-33	3-9	VT1240	14,920	142					12/14	65/68		1800	69		18.3	50	4.8	1	4	I		
			68	6¼	Smi	F-2	3-9	AR1555										2000	68		18.3	56	4.2					

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HTC 308 K

† BIT CONDITION CODE: RP - REPAIRED RR-RERUN

INTRODUCTION

After the 1976 drilling season, casing requirements were reviewed and design of casing strings standardized. Every effort was made to minimize weight and grade changes for simplicity, cost effectiveness, and to reduce chances of error during handling and running operations. Casing sizes were selected to accommodate designs for wells from 2,000' to 20,000'. Steel grade selection was the controlling factor on design with low hardness (Rockwell C24-28) steel being selected for Arctic application and possible H_2S environment. Below is listed casing sizes and design criteria required by Husky:

		YIELD STRENGTH (PSI)		MINIMUM PRESSURE REQUIREMENT (PSI)		
SIZE[1]	WEIGHT	MIN.	MAX.	COLLAPSE	BURST	CONNECTION
20"	133#/ft.	55,000	80,000	1,500	3,050	STC
13-3/8"[2]	72#/ft.	95,000	110,000	3,450	5,350	BTC
9-5/8"[3]	53.5#/ft.	95,000	110,000	8,850	7,900	BTC
9-3/4"[3]	59.2#/ft.	95,000	110,000	9,750	8,540	BTC
7"	38#/ft.	95,000	110,000	12,600	9,200	BTC

(1) OD tolerance to be within API requirements unless adjustment absolutely necessary to meet ID requirements.

(2) Special drift to 12.25".

(3) Special drift to 8.50".

The following are additional requirements primarily to assure that the steel exhibits the metallurgical properties for Arctic applications and resistance to hydrogen embrittlement.

1. All pipe that is 13-3/8" OD and smaller to be quenched and tempered.

2. Run Charpy "V" notch tests on two random samples per 50 tons per heat. Minimum acceptance of 15 ft.-lb.@-50°F. Furnish test reports with order.

3. Perform all testing normally required for API approved pipe.

4. Furnish test reports for ladle analysis, quantitative analysis, and all check tests as per API requirements.

In addition, the following handling requirements were made:

1. Collars must be of same steel grade as pipe body.

2. Apply an API modified thread compound on mill-installed collar before bucking on.

3. Inspect at mill using Tuboscope's Amalog IV or equivalent on 9-3/4" and smaller, and at least magnetic particle on 13-3/8" and 20". All pipe to have special and area inspection together with full length API drifting. (Note special drifting requirements.)

4. Apply Arctic grade grease on all connections before installing thread protectors.

5. Install closed-end type thread protectors. Plastic plugs can be used to secure wrench openings in protectors.

6. Buck up thread protectors with impact wrench. Both mill and third party inspection personnel should observe the installation of thread protectors.

7. Palletize or containerize the tubulars, if possible, prior to shipment from mill. Do not haul pipe like cordwood in gondola railroad cars.

8. All pipe to be Range 3.

9. No "V" notching or metal stenciling on pipe body or collars.

The casing programmed for Seabee Test Well No. 1 was as follows: 30" at ±100'; 20" at ±1500'; 13-3/8" at ±4000'; 9-5/8" at ±10,000'; 7" liner to a Total Depth of 15,200' if needed for evaluation purposes.

Actual casing run was 30" at 115', 20" at 1617', 13-3/8" at 3983', 9-5/8" at 9980' (9977'?) and a 7-5/8" liner from 9661' to 12,814'. The 7-5/8" casing was run high to help control hole problems due to an overpressured section below 10,000'. The 9-5/8" casing was left full of diesel from 1320' to the surface to allow future temperature measurements by U. S. Geological Survey personnel.

CASING TALLY
SUMMARY SHEET

DATE: July 15, 1979

FIELD National Petroleum Reserve in AK LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 20 " CASING

SUMMARY OF PAGE MEASUREMENTS

	NO. OF JOINTS	FEET	00'S
PAGE 1	44	1617	48
PAGE 2			
PAGE 3			
PAGE 4			
PAGE 5			
PAGE 6			
PAGE 7			
PAGE 8			
PAGE 9			
TOTAL	44	1617	48

SUMMARY OF DEPTH CALCULATIONS

		NO. OF JOINTS	FOOTAGE FEET	FOOTAGE 00'S
1	TOTAL CASING ON RACKS	55	2079	48
2	LESS CASING OUT (JTS NOS.	11	462	00
3	TOTAL (1 - 2)		1617	48
4	SHOE LENGTH	1	2	69
5	FLOAT LENGTH	1	2	43
6	MISCELLANEOUS EQUIPMENT LENGTH			
7	TOTAL CASING AND EQUIPMENT FROM CEMENT HEAD (3 + 4 + 5 + 6)		1622	60
8	LESS WELL DEPTH (KB REFERENCE)		1624	00
9	"UP" ON LANDING JOINT		5	12

Weight indicator before cementing: 237,000 ; after slack-off: _____ ; inches slacked off _____

SUMMARY OF STRING AS RUN

WEIGHT	GRADE	THREAD	MANUFACTURER	CONDITION NEW-USED	LOCATION IN STRING	NO. OF JOINTS	FOOTAGE	INTERVAL
169	K-55	8 Rd	U. S. Steel	Used	JT NO. _____ THRU NO. _____	Shoe	2.69	' - 1617.48 '
133	K-55	8 Rd	U. S. Steel	Used	JT NO. 0 THRU NO. 1		32.02	' - 1614.79 '
					JT NO. _____ THRU NO. _____	Float Collar	2.43	' - 1582.77 '
					JT NO. 2 THRU NO. 20	19	608.94	' - 1580.34 '
					JT NO. 21 THRU NO. 44	24	971.40	' - 971.40 '
					JT NO. _____ THRU NO. _____		Above Table	' + 5.12 '
					JT NO. _____ THRU NO. _____		Total String	' - 1622.60 '

PAGE 1 OF 1

CASING TALLY

DATE: July 14, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 20 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	32	02			
2	35	14			
3	32	95			
4	32	23			
5	28	26			
6	31	23			
7	34	43			
8	33	77			
9	32	49			
0	31	41			
TOTAL A	323	93			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	38	82			
2	36	25			
3	42	03			
4	40	00			
5	41	82			
6	41	85			
7	40	18			
8	40	65			
9	40	37			
0	43	82			
TOTAL D	405	79			

1	29	13			
2	32	80			
3	32	37			
4	33	94			
5	33	78			
6	33	38			
7	27	86			
8	33	46			
9	33	94			
0	31	49			
TOTAL B	322	15			

1	42	52			
2	41	52			
3	36	74			
4	34	27			
5					
6					
7					
8					
9					
0					
TOTAL E	155	05			

1	37	23			
2	37	72			
3	41	00			
4	42	47			
5	40	53			
6	43	06			
7	43	47			
8	41	66			
9	42	50			
0	40	92			
TOTAL C	410	56			

TOTAL A	323	93		
TOTAL B	322	15		
TOTAL C	410	56		
TOTAL D	405	79		
TOTAL E	155	05		
TOTAL PAGE	1617	48		

CASING OR LINER CEMENT JOB

Lease National Petroleum Reserve Well Seabee Test Well No. 1 Date July 15, 1979

Size Casing 20" Setting Depth 1617.48' Top (liner hanger) -

Hole Size 26" " Mud Gradient 9.4 Viscosity 82

Casing Equipment

Halliburton shoe, - float located 1582.77 feet

above shoe. (DV, FO) collars located at feet

and feet.

Nine centralizers located at 1607', 1548', 1515', 1483', 1424', 1355', 1292', 1230', and 1163'.

scratchers located

Liner hanger and pack off (describe)

Miscellaneous (baskets, etc.)

Cement (around shoe)

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(1)	3400	Dowell	AS II		15.2	566 Bbls
(2)						

Cement through (DV, FO) Collar at 1582.77 feet

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(3)						
(4)						

Cementing Procedure (around shoe) (cross out where necessary)

Circulated _____ bbls @ _____ BPM, pumped in _____ (cu. ft.), (barrels) _____ _____ prewash, used bottom plug (yes, no), mixed cement (1) above _____ minutes, cement (2) above _____ minutes, top plug (yes, no) displaced with _____ (cu. ft.), (barrels) in _____ minutes at rate of _____ BPM, CFM, (Bumped plug) (Did not bump plug) Final Pressure _____. Reciprocated pipe _____ feet while (mixing) and (displacing) cement Displacing time _____ minutes. Had _____ circulation (full, partial, none, etc.). Completed job at _____ a.m., p.m.

Cementing Procedure (through (DV, FO) at _____ feet) (cross out where necessary)

Opened (DV, FO) at _____ a.m., p.m., circulated _____ bbls @ _____ BPM, pumped in _____ (cu. ft.), (barrels) _____ prewash, mixed cement (3) above _____ minutes, cement (4) above _____ minutes, dropped closing plug, displaced with _____ (cu. ft.), (barrels) in _____ minutes at rate of _____ _____ BPM, CFM. (Bumped plug) (Did not bump plug). Final Pressure _____ Displacing time _____ minutes. Had _____ circulation (full, partial, none, etc.)

Remarks (Third Stage Job, etc.)

Established breakdown at 3 BPM with 1750 psi. Pulled out of packer; pumped 15 barrels water. Put 200 psi backpressure; pumped 15 barrels water. Mixed and pumped 200 sacks cement; pumped 3 barrels water. Displaced with 116 barrels mud stabbed in. Pumped 48 barrels mud; unstabbed; pumped 4 barrels mud. Maximum squeeze pressure: 2000 psi; reduced to 1800 psi through job at 2 BPM. Cement in place January 23, 1980, at 2:46 PM. Pulled two stands; reversed out no cement.

Johnny Thompson
Foreman

CASING TALLY
SUMMARY SHEET

DATE: July 28, 1979

FIELD National Petroleum Reserve in Alaska LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 13 3/8" CASING

SUMMARY OF PAGE MEASUREMENTS			
	NO. OF JOINTS	FEET	00'S
PAGE 1	50	1907	00
PAGE 2	50	1963	60
PAGE 3	17	676	93
PAGE 4			
PAGE 5			
PAGE 6			
PAGE 7			
PAGE 8			
PAGE 9			
TOTAL		4547	53

SUMMARY OF DEPTH CALCULATIONS				
		NO. OF JOINTS	FOOTAGE FEET	00'S
1	TOTAL CASING ON RACKS	117	4547	53
2	LESS CASING OUT (JTS NOS.	14	572	34
3	TOTAL (1 - 2)		3975	19
4	SHOE LENGTH		1	90
5	FLOAT LENGTH		1	98
6	MISCELLANEOUS EQUIPMENT LENGTH		7	82
7	TOTAL CASING AND EQUIPMENT FROM CEMENT HEAD (3 + 4 + 5 + 6)		3987	09
8	LESS WELL DEPTH (KB REFERENCE)		3983	52
9	"UP" ON LANDING JOINT		3	57

Weight indicator before cementing: 254,000 ; after slack-off: _____ ; inches slacked off _____ .

SUMMARY OF STRING AS RUN								
WEIGHT	GRADE	THREAD	MANUFACTURER	CONDITION NEW-USED	LOCATION IN STRING	NO. OF JOINTS	FOOTAGE	INTERVAL
72	S-95	Buttress	U.S. Steel	New	JT NO. THRU NO. Shoe		1.90	3983.52' - 3981.62'
				-	JT NO. 1 THRU NO. 2	2	84.00	3981.62' - 3897.62'
				Used	JT NO. THRU NO. Float		1.98	3897.62' - 3895.64'
					JT NO. 3 THRU NO. 52	50	1901.98	3895.64' - 1993.66'
					JT NO. THRU NO. 70		3.91	1993.66' - 1989.75'
					JT NO. 53 THRU NO. 77	25	989.82	1989.75' - 999.93'
					JT NO THRU NO. 70		3.91	999.93' - 996.02'
					78 103	26	996.02	996.02' 3.57'
					Up above KB			3.57'

PAGE 1 OF 3

CASING TALLY

DATE: July 26, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 13 3/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	41	83			
2	42	17			
3	37	31			
4	40	36			
5	41	49			
6	36	60			
7	40	69			
8	38	29			
9	35	02			
0	41	42			
TOTAL A	395	18			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	39	30			
2	39	76			
3	35	03			
4	33	47			
5	41	82			
6	39	02			
7	37	77			
8	35	34			
9	40	30			
0	35	51			
TOTAL D	377	36			

1	35	35			
2	38	00			
3	40	90			
4	41	82			
5	36	75			
6	37	42			
7	40	35			
8	38	06			
9	36	83			
0	42	97			
TOTAL B	388	45			

1	36	40			
2	41	27			
3	35	13			
4	36	82			
5	38	70			
6	36	50			
7	36	22			
8	36	08			
9	37	49			
0	36	30			
TOTAL E	370	91			

1	32	57			
2	37	38			
3	34	68			
4	39	42			
5	39	71			
6	36	95			
7	35	38			
8	40	97			
9	37	12			
0	40	92			
TOTAL C	375	10			

TOTAL A	395	18		
TOTAL B	388	45		
TOTAL C	375	10		
TOTAL D	377	36		
TOTAL E	370	91		
TOTAL PAGE	1907	00		

PAGE 2 OF 3 **CASING TALLY** DATE: July 26, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 13 3/8" CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	38	53			
2	40	45			
3	43	02			
4	40	22			
5	41	20			
6	35	61			
7	40	71			
8	39	27			
9	35	92			
0	42	95			
TOTAL A	397	18			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	37	90			
2	40	97			
3	40	48			
4	35	20			
5	37	53			
6	41	43			
7	42	64			
8	41	71			
9	37	60			
0	31	97			
TOTAL D	387	35			

1	40	15			
2	41	63			
3	41	38			
4	41	96			
5	41	41			
6	36	72			
7	41	24			
8	40	63			
9	40	47			
0	36	74			
TOTAL B	402	33			

1	42	03			
2	38	95			
3	40	42			
4	41	77			
5	35	48			
6	36	47			
7	38	21			
8	42	17			
9	38	93			
0	41	90			
TOTAL E	396	33			

1	39	17			
2	38	73			
3	38	54			
4	36	87			
5	40	56			
6	38	67			
7	36	75			
8	38	50			
9	37	00			
0	35	62			
TOTAL C	380	41			

TOTAL A	397	18		
TOTAL B	402	33		
TOTAL C	380	41		
TOTAL D	387	35		
TOTAL E	396	33		
TOTAL PAGE	1963	60		

PAGE 3 OF 3

CASING TALLY

DATE: July 26, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 13 3/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	35	59			
2	39	17			
3	36	42			
4	41	21			
5	41	62			
6	42	65			
7	42	58			
8	40	03			
9	41	02			
0	36	92			
TOTAL A	397	21			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
TOTAL D					

1	41	06			
2	40	85			
3	40	41			
4	39	43			
5	39	00			
6	40	91			
7	38	06			
8					
9					
0					
TOTAL B	279	72			

1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
TOTAL E					

1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
TOTAL C					

TOTAL A	397	21		
TOTAL B	279	72		
TOTAL C				
TOTAL D				
TOTAL E				
TOTAL PAGE	676	93		

CASING OR LINER CEMENT JOB

Lease National Petroleum Reserve Well Seabee Test Well No. 1 Date July 30, 1979

Size Casing 13 3/8" Setting Depth 3983.52' Top (liner hanger) _____

Hole Size 17 1/2 " Mud Gradient 10.1 Viscosity 85

Casing Equipment

Dowell shoe at 3981.62 ; float located 84 feet

above shoe at 3895.64 (FO) collars located at 1989.75 feet

and 996.02 feet.

Nineteen centralizers located at 3971', 3979', 3816', 3776', 3734',

3694', 3620', 3543', 3465', 3386', 3308', 3233', 3158', 3081', 3004', 2034', 1946',

1036', and 757'. scratchers located _____

_____

Liner hanger and pack off (describe) _____

_____

Miscellaneous (baskets, etc.) _____

_____

Cement (around shoe)

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(1)	1600	Dowell	"G"	.75% D-65 & .1% D-13R	15.8	328
(2)						

Cement through (FO) Collar at 1989 feet

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(3)	1450	Dowell	AS II		15.2	243
(4)						

Cementing Procedure (around shoe) (cross out where necessary)

Circulated 566 bbls @ 3 BPM, pumped in 3400 ~~(cu. ft.)~~, (barrels) _____

20 barrels prewash, used bottom plug ~~(yes~~, no), mixed cement (1) above 195

minutes, ~~cement (2) above~~ _____ ~~minutes~~, top plug ~~(yes~~, no) displaced with 24 barrels mud & 2 barrels water ~~(cu. ft.)~~, (barrels) in _____ minutes at rate of _____ BPM, CFM, (Bumped plug) (Did not bump plug). Final Pressure 500 pounds. Reciprocated pipe _____ feet while (mixing) and (displacing) cement. Displacing time five minutes. Had full circulation (full, partial, none, etc.). Completed job at 10:00 ~~a.m.~~, p.m.

Cementing Procedure (through (DV, FO) at _____ feet) (cross out where necessary)

Opened (DV, FO) at _____ a.m., p.m., circulated _____ bbls @ _____ BPM, pumped in _____ (cu. ft.), (barrels) _____ prewash, mixed cement (3) above _____ minutes, cement (4) above _____ minutes, dropped closing plug, displaced with _____ (cu. ft.), (barrels) in _____ minutes at rate of _____ _____ BPM, CFM. (Bumped plug) (Did not bump plug). Final Pressure _____

Displacing time _____ minutes. Had _____ circulation (full, partial, none, etc.)

Remarks (Third Stage Job, etc.)

Cemented with 15.2 slurry at 3 to 8 barrels per minute. Had full returns to surface with 15.2 to 15.1 slurry back. Cement samples at surface were hard in seven hours. Job looks good.

Johnny L. Thompson

Foreman

CASING TALLY
SUMMARY SHEET

DATE: November 23, 1979

FIELD National Petroleum Reserve in Alaska LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8" CASING

SUMMARY OF PAGE MEASUREMENTS			
	NO OF JOINTS	FEET	.00'S
PAGE 1	50	2179	57
PAGE 2	50	2166	67
PAGE 3	50	2153	64
PAGE 4	50	2103	71
PAGE 5	32	1366	87
PAGE 6			
PAGE 7			
PAGE 8			
PAGE 9			
TOTAL	232	9970	46

SUMMARY OF DEPTH CALCULATIONS				
		NO. OF JOINTS	FOOTAGE FEET	.00'S
1	TOTAL CASING ON RACKS	232	9970	46
2	LESS CASING OUT (JTS NOS.)	0	0	0
3	TOTAL (1 - 2)		9970	46
4	SHOE LENGTH		1	84
5	FLOAT LENGTH		1	84
6	MISCELLANEOUS EQUIPMENT LENGTH		11	28
7	TOTAL CASING AND EQUIPMENT FROM CEMENT HEAD (3 + 4 + 5 + 6)		9985	42
8	LESS WELL DEPTH (KB REFERENCE)		9981	42
9	"UP" ON LANDING JOINT		4	00

Weight indicator before cementing: 400,000 ; after slack-off: 25,000 ; inches slacked off 6 .

SUMMARY OF STRING AS RUN								
WEIGHT	GRADE	THREAD	MANUFACTURER	CONDITION NEW-USED	LOCATION IN STRING	NO. OF JOINTS	FOOTAGE	INTERVAL
53.5	S-95	Buttress	-	New	JT NO. 1 THRU NO. 232	32	9970.46	Continuous
					JT NO. THRU NO			
					JT NO. THRU NO			
					JT NO. THRU NO			
					JT NO. THRU NO			
					JT NO. THRU NO			
					JT NO. THRU NO			

PAGE 1 OF 5

CASING TALLY

DATE: November 24, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	.00'S	CHECK MEASUREMENT FEET	.00'S	WT GR.
1	43	80			
2	36	56			
3	44	72			
4	42	63			
5	42	48			
6	45	92			
7	42	75			
8	42	00			
9	43	32			
0	41	46			
TOTAL A	425	64			

JOINT NO.	FIRST MEASUREMENT FEET	.00'S	CHECK MEASUREMENT FEET	.00'S	WT GR.
1	43	48			
2	44	52			
3	44	08			
4	43	54			
5	43	84			
6	43	65			
7	42	12			
8	45	08			
9	43	98			
0	44	40			
TOTAL D	440	09			

1	45	94			
2	43	10			
3	40	40			
4	43	12			
5	43	20			
6	45	35			
7	45	12			
8	40	92			
9	43	88			
0	45	62			
TOTAL B	436	65			

1	44	36			
2	43	32			
3	44	06			
4	43	78			
5	43	28			
6	42	34			
7	41	10			
8	44	20			
9	44	28			
0	44	62			
TOTAL E	435	34			

1	45	42			
2	46	24			
3	43	70			
4	44	62			
5	44	50			
6	43	40			
7	43	35			
8	44	30			
9	44	50			
0	41	82			
TOTAL C	441	85			

TOTAL A	425	64		
TOTAL B	436	65		
TOTAL C	441	85		
TOTAL D	440	09		
TOTAL E	435	34		
TOTAL PAGE	2179	57		

PAGE 2 OF 5 **CASING TALLY** DATE: November 24, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8" CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	43	80			
2	43	52			
3	43	60			
4	44	54			
5	38	72			
6	42	55			
7	44	70			
8	46	14			
9	44	34			
0	44	04			
TOTAL A	435	95			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	43	94			
2	44	16			
3	43	06			
4	42	92			
5	45	24			
6	44	66			
7	44	82			
8	44	18			
9	44	48			
0	36	30			
TOTAL D	433	76			

1	42	95			
2	43	52			
3	41	25			
4	43	88			
5	43	28			
6	45	24			
7	44	80			
8	45	28			
9	45	82			
0	44	32			
TOTAL B	440	34			

1	44	00			
2	43	22			
3	34	64			
4	45	02			
5	43	33			
6	44	84			
7	42	70			
8	41	82			
9	45	48			
0	43	00			
TOTAL E	428	05			

1	43	56			
2	41	35			
3	42	00			
4	41	38			
5	42	46			
6	45	10			
7	45	86			
8	40	92			
9	42	02			
0	43	92			
TOTAL C	428	57			

TOTAL A	435	95		
TOTAL B	440	34		
TOTAL C	428	57		
TOTAL D	433	76		
TOTAL E	428	05		
TOTAL PAGE	2166	67		

PAGE 3 OF 5

CASING TALLY

DATE: November 24, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	43	38			
2	43	30			
3	42	90			
4	44	26			
5	45	12			
6	44	12			
7	44	13			
8	45	76			
9	44	22			
0	43	22			
TOTAL A	440	41			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	44	48			
2	43	00			
3	42	66			
4	46	02			
5	37	00			
6	41	76			
7	40	42			
8	44	60			
9	43	65			
0	41	02			
TOTAL D	424	61			

1	44	08			
2	43	75			
3	44	43			
4	40	98			
5	44	64			
6	43	12			
7	44	72			
8	43	96			
9	43	63			
0	41	86			
TOTAL B	435	17			

1	45	80			
2	41	00			
3	44	20			
4	45	38			
5	42	60			
6	40	50			
7	42	58			
8	41	90			
9	46	54			
0	44	22			
TOTAL E	434	72			

1	45	78			
2	39	18			
3	43	62			
4	45	04			
5	39	76			
6	43	95			
7	40	62			
8	41	12			
9	43	84			
0	35	82			
TOTAL C	418	73			

TOTAL A	440	41		
TOTAL B	435	17		
TOTAL C	418	73		
TOTAL D	424	61		
TOTAL E	434	72		
TOTAL PAGE	2153	64		

PAGE 4 OF 5 **CASING TALLY** DATE: November 24, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	43	34			
2	44	22			
3	42	78			
4	41	65			
5	43	56			
6	37	30			
7	39	28			
8	40	34			
9	44	12			
0	40	62			
TOTAL A	417	21			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	44	46			
2	46	02			
3	39	14			
4	39	50			
5	46	34			
6	43	74			
7	39	62			
8	44	42			
9	45	60			
0	43	62			
TOTAL D	432	46			

1	36	10			
2	40	44			
3	38	08			
4	37	30			
5	40	84			
6	41	72			
7	40	14			
8	41	72			
9	42	12			
0	46	82			
TOTAL B	405	28			

1	40	68			
2	42	28			
3	44	23			
4	44	62			
5	45	36			
6	42	86			
7	43	68			
8	44	62			
9	44	86			
0	39	96			
TOTAL E	433	15			

1	39	63			
2	43	24			
3	44	91			
4	39	40			
5	37	56			
6	39	89			
7	41	81			
8	41	92			
9	45	65			
0	41	60			
TOTAL C	415	61			

TOTAL A	417	21		
TOTAL B	405	28		
TOTAL C	415	61		
TOTAL D	432	46		
TOTAL E	433	15		
TOTAL PAGE	2103	71		

PAGE 5 OF 5 **CASING TALLY** DATE: November 24, 1979

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 9 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	41	24			
2	42	12			
3	42	93			
4	41	20			
5	42	81			
6	45	63			
7	44	87			
8	39	63			
9	39	84			
0	45	08			
TOTAL A	425	35			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	43	04			
2	45	58			
3					
4					
5					
6					
7					
8					
9					
0					
TOTAL D	88	62			

1	43	86			
2	45	07			
3	43	67			
4	43	62			
5	42	37			
6	41	46			
7	43	52			
8	43	82			
9	44	13			
0	42	70			
TOTAL B	434	22			

1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
TOTAL E					

1	42	02			
2	44	35			
3	34	40			
4	37	75			
5	37	00			
6	42	44			
7	45	38			
8	45	84			
9	44	80			
0	44	70			
TOTAL C	418	68			

TOTAL A	425	35		
TOTAL B	434	22		
TOTAL C	418	68		
TOTAL D	88	62		
TOTAL E	-	-		
TOTAL PAGE	1366	87		

CASING OR LINER CEMENT JOB

Lease National Petroleum Reserve Well Seabee Test Well No. 1 Date November 24, 1979

Size Casing 9 5/8" Setting Depth 9980' Top (liner hanger) -

Hole Size 12 1/4" " Mud Gradient .7748 Viscosity 48

Casing Equipment

Dowell shoe, 9980'; float located 9897 (83 feet above shoe,) Dowell (DV, ~~FO~~) collars located at 5591.75' and Howco FOs at 3519 and 2103'.

Twenty-five centralizers located as per program.

_____ scratchers located _____

Liner hanger and pack off (describe) None

Miscellaneous (baskets, etc.) _____

Cement (around shoe)

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(1)	1200	Dowell	"G"	.75% D-65 and .3% D-13	15.8	245 Bbls
(2)						

Cement through (DV, FO) Collar at _____ feet

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(3)	1600	Dowell	"G"	.75% D-65	15.8	327 Bbls
(4)						

Cementing Procedure (around shoe) (cross out where necessary)

Circulated 350 bbls @ 5 BPM, pumped in 1840 ~~(cu. ft.)~~, (barrels) _____ _____ prewash, used bottom plug (yes, no), mixed cement (1) above 70 minutes, ~~cement (2) above _____ minutes~~, top plug (yes, no) displaced with _____ (cu. ft.), (barrels) in _____ minutes at rate of _____ BPM, CFM, (Bumped plug) (Did not bump plug). Final Pressure 500 pounds. Reciprocated pipe - feet while (mixing) and (displacing) cement. Displacing time 15 minutes. Had full circulation (full, partial, none, etc.). Completed job at 10:05 a.m., ~~p.m.~~

Cementing Procedure (through (DV, FO) at 1989 feet) (cross out where necessary)

Opened (DV, FO) at 9:30 a.m., ~~p.m.~~, circulated 300 bbls @ 5 BPM, pumped in 243 ~~(cu. ft.)~~, (barrels) _____ prewash, mixed cement (3) above 55 minutes, ~~cement (4) above _____ minutes~~, dropped closing plug, displaced with 21.5 ~~(cu. ft.)~~, (barrels) in 15 minutes at rate of 5 _____ BPM, ~~CFM~~. (Bumped plug) (Did not bump plug). Final Pressure 1000 Displacing time 6 minutes. Had full circulation (full, partial, none, etc.)

Remarks (Third Stage Job, etc.)

On bottom job, circulated out cement. Pulled out of hole: picked up Halliburton tools on bottom FO. Got returns with 1260 sacks cement away. Pumped cement until it weighed 15 pounds (1450 sacks). Did not do top job.

Jim Brown
Foreman

CASING TALLY
SUMMARY SHEET

DATE: January 21, 1980

FIELD National Petroleum Reserve in Alaska LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 7 5/8"

SUMMARY OF PAGE MEASUREMENTS

	NO. OF JOINTS	FEET	00'S
PAGE 1	50	2016	79
PAGE 2	43	1725	30
PAGE 3			
PAGE 4			
PAGE 5			
PAGE 6			
PAGE 7			
PAGE 8			
PAGE 9			
TOTAL	93	3742	09

SUMMARY OF DEPTH CALCULATIONS

		NO. OF JOINTS	FOOTAGE FEET	FOOTAGE 00'S
1	TOTAL CASING ON RACKS	93	3742	09
2	LESS CASING OUT IJTS NOS.		604	75
3	TOTAL (1 - 2)		3137	34
4	SHOE LENGTH		1	85
5	FLOAT LENGTH		-	-
6	MISCELLANEOUS EQUIPMENT LENGTH		19	92
7	TOTAL LINER AND EQUIPMENT		3159	11
8	LESS WELL DEPTH (KB REFERENCE)		12,814	00
9	TOP LINER AT		9654	89

Weight indicator before cementing: _____ ; after slack-off: _____ ; inches slacked off _____ .

SUMMARY OF STRING AS RUN

WEIGHT	GRADE	THREAD	MANUFACTURER	CONDITION NEW-USED	LOCATION IN STRING	NO. OF JOINTS	FOOTAGE	INTERVAL
39	S-95	ABFL4S		New	JT NO. 1 THRU NO. 78	78	3137.34	12,814' - 9654.89'
					JT NO. THRU NO.			
					JT NO. THRU NO.			
					JT NO. THRU NO.			
					JT NO. THRU NO.			
					JT NO. THRU NO.			
					JT NO. THRU NO.			

PAGE 1 OF 2

CASING TALLY

DATE: January 14, 1980

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 7 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	41	09			
2	36	73			
3	38	97			
4	38	56			
5	39	14			
6	40	93			
7	40	69			
8	38	88			
9	41	45			
0	40	26			
TOTAL A	396	67			

1	39	50			
2	40	40			
3	39	26			
4	39	08			
5	40	83			
6	40	49			
7	39	96			
8	39	34			
9	39	94			
0	39	18			
TOTAL B	397	98			

1	40	88			
2	40	86			
3	40	74			
4	45	21			
5	36	63			
6	40	34			
7	38	96			
8	38	25			
9	43	55			
0	39	68			
TOTAL C	405	10			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	41	16			
2	40	78			
3	41	02			
4	41	15			
5	41	33			
6	39	82			
7	41	96			
8	44	20			
9	41	41			
0	41	18			
TOTAL D	414	01			

1	42	31			
2	40	18			
3	38	81			
4	40	78			
5	40	14			
6	40	84			
7	40	63			
8	38	44			
9	40	05			
0	40	82			
TOTAL E	403	00			

TOTAL A	396	70		
TOTAL B	397	98		
TOTAL C	405	10		
TOTAL D	414	01		
TOTAL E	403	00		
TOTAL PAGE	2016	79		

PAGE 2 OF 2 **CASING TALLY** DATE: January 14, 1980

FIELD NPRA LEASE & WELL NO. Seabee Test Well No. 1 TALLY FOR 7 5/8 " CASING

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	39	15			
2	42	70			
3	41	28			
4	41	62			
5	40	59			
6	39	33			
7	40	75			
8	40	76			
9	39	34			
0	40	58			
TOTAL A	406	10			

JOINT NO.	FIRST MEASUREMENT FEET	FIRST MEASUREMENT .00'S	CHECK MEASUREMENT FEET	CHECK MEASUREMENT .00'S	WT GR.
1	41	06			
2	40	90			
3	38	58			
4	39	81			
5	39	08			
6	39	05			
7	42	63			
8	40	29			
9	35	72			
0	39	51			
TOTAL D	396	63			

1	40	73			
2	40	20			
3	39	61			
4	35	53			
5	40	36			
6	41	14			
7	39	13			
8	37	89			
9	42	91			
0	41	69			
TOTAL B	399	19			

1	38	37			
2	41	01			
3	42	93			
4					
5					
6					
7					
8					
9					
0					
TOTAL E	122	31			

1	39	38			
2	39	08			
3	40	58			
4	39	90			
5	39	71			
6	37	60			
7	40	83			
8	38	18			
9	42	41			
0	43	40			
TOTAL C	402	07			

TOTAL A	406	10		
TOTAL B	399	19		
TOTAL C	402	07		
TOTAL D	396	63		
TOTAL E	122	31		
TOTAL PAGE	1726	30		

CASING OR LINER CEMENT JOB

Lease National Petroleum Reserve Well Seabee Test Well No. 1 Date January, 1980

Size Casing 7 5/8" Setting Depth 12,814' Top (liner hanger) 9660.94'

Hole Size 8 1/2 " Mud Gradient 0.884 Viscosity _____

Casing Equipment

12,812.15 top shoe, 12,732.69 top landing collar located 79.46 feet

top above shoe, _____ (DV, FO) collars located at _____ feet

and _____ feet.

_____ ~~centralizers located~~ Top liner hanger at 9660.94'. Top Tie-back sleeve at 9654.89'.

_____ scratchers located _____

Liner hanger and pack off (describe) Liner hanger: BOT type, MC hydraulic set, 7 5/8", 8 RD X 9 5/8", 53.5#.

Miscellaneous (baskets, etc.) _____

Cement (around shoe)

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(1)	896		"G"	1.25% D-65 & 0.2% D-13R	18.1	1075.20 ft/3
(2)						

Cement through (DV, FO) Collar at _____ feet

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(3)						
(4)						

Cementing Procedure (around shoe) (cross out where necessary)

Circulated 240 bbls @ 10 BPM, pumped in 168 (cu. ft.), (barrels) and 30 barrels prewash, used bottom plug (yes, ~~no~~), mixed cement (1) above 96 minutes, ~~cement (2) above~~ ~~minutes~~, top plug (yes, ~~no~~) displaced with 699 (cu. ~~ft.~~), (barrels) in 84 minutes at rate of 10 BPM, ~~CPM~~. (Bumped plug) ~~(Did not bump plug)~~. Final Pressure 3000 psi. Reciprocated pipe 0 feet while (mixing) and (displacing) cement. Displacing time 84 minutes. Had full circulation (full, partial none, etc.). Completed job at 10:20 a.m., ~~p.m.~~

Cementing Procedure (through (DV, ~~FO~~) at 5585 feet) (cross out where necessary)

Opened (DV, ~~FO~~) at 11:30 a.m., ~~p.m.~~, circulated _____ bbls @ 10 and 7 BPM, pumped in 30 ~~(cu-ft.)~~, (barrels) water prewash, mixed cement (3) above 65 minutes, ~~cement (4) above~~ ~~minutes~~, dropped closing plug, displaced with 396 ~~(cu-ft.)~~, (barrels) in 44 minutes at rate of 10 _____ BPM, ~~CPM~~. (Bumped plug) ~~(Did not bump plug)~~. Final Pressure 2200 psi Displacing time 44 minutes. Had full circulation (full, partial, none, etc.)

Remarks (Third Stage Job, etc.)

Lost 30 barrels: Returns while displacing second stage. Had some cement contamination. Also had 750 units gas after displacing approximately 1600 strokes. When finished displacing, was down to 40 units.

Jim Gaffaney
Foreman

CASING OR LINER CEMENT JOB

Lease National Petroleum Reserve Well Seabee Test Well No. 1 Date January 23, 1980

Size Liner 7 5/8" Setting Depth 9661' to 12,814' Top (liner hanger) 9661

Hole Size 8 1/2" Mud Gradient .884 Viscosity 62

Casing Equipment

_____ shoe, _____ float located _____ feet

above shoe, _____ (DV, FO) collars located at _____ feet

and _____ feet.

_____ centralizers located _____

_____

_____ scratchers located _____

_____

Liner hanger and pack off (describe) _____

_____

Miscellaneous (baskets, etc.) _____

_____

Cement ~~(around shoe)~~ Liner Top Squeeze

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(1)	200		"G"	1.25% D-65 & .2% D-13R	17.2	36 Bbls
(2)						

Cement through ~~(DV, FO) Collar~~ EZ Drill Retainer at 9576 feet

	No. Sacks	Brand	Type	Additives	Slurry Weight	Slurry Volume
(3)						
(4)						

Cementing Procedure (around shoe) (cross out where necessary)

Circulated 1800 bbls @ 5.83 BPM, pumped in 40 ~~(cu. ft.)~~, (barrels) spacer 1000 prewash, used bottom plug ~~(yes,~~ no), mixed cement (1) above 57 minutes, cement (2) above _____ minutes, top plug (yes, no) displaced with 292 ~~(cu. ft.)~~, (barrels) in 95 minutes at rate of 4 BPM, ~~CFM.~~ (Bumped plug) ~~(Did not bump plug).~~ Final Pressure 3000. Reciprocated pipe 0 feet while (mixing) and (displacing) cement. Displacing time 95 minutes. Had full circulation (full, partial, none, etc.). Completed job at 3:35 a.m., ~~p.m.~~

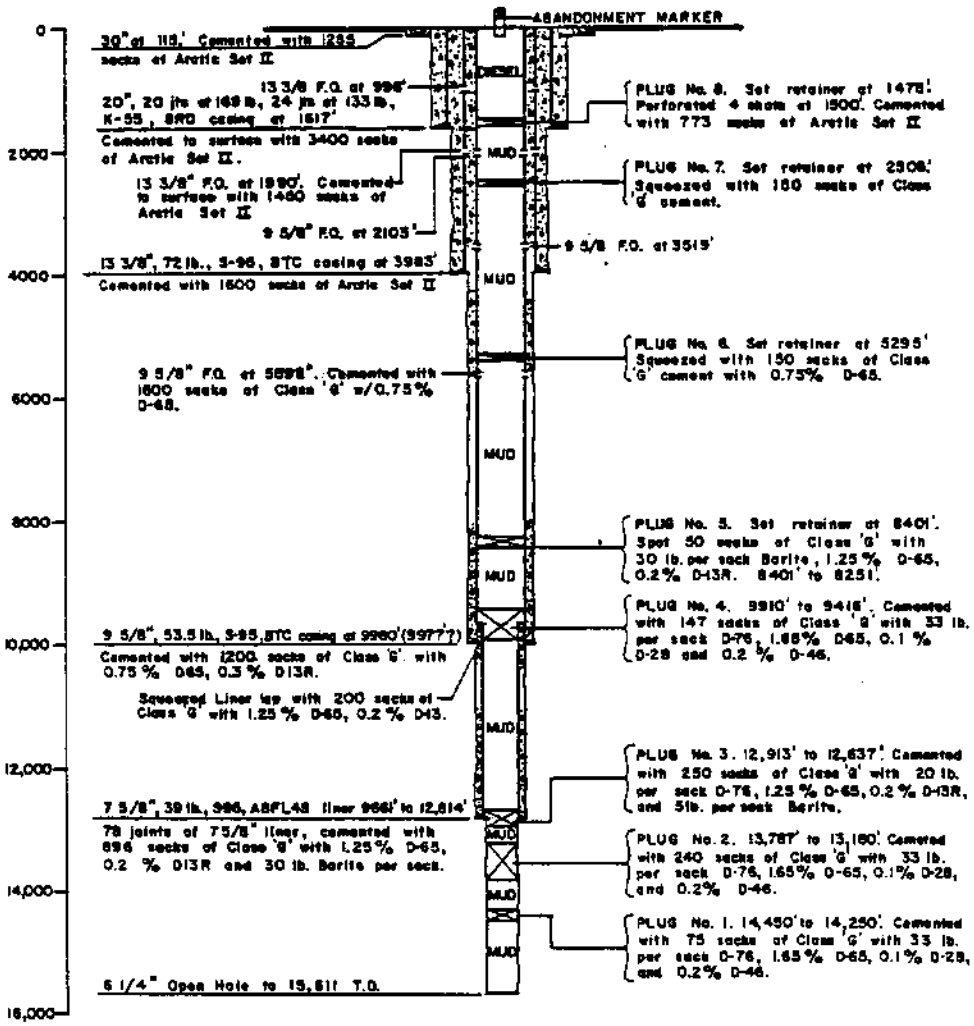
Cementing Procedure (through (DV, FO) at _____ feet) (cross out where necessary)

Opened (DV, FO) at _____ a.m., p.m., circulated _____ bbls @ _____ BPM, pumped in _____ (cu. ft.), (barrels) _____ prewash, mixed cement (3) above _____ minutes, cement (4) above _____ minutes, dropped closing plug, displaced with _____ (cu. ft.), (barrels) in _____ minutes at rate of _____ _____ BPM, CFM. (Bumped plug) (Did not bump plug). Final Pressure _____ Displacing time _____ minutes. Had _____ circulation (full, partial), none, etc.)

Remarks (Third Stage Job, etc.)

Mixed spacer 1000 to 17.0 ppg (40 barrels). Slurry temperature: 74°F. Mixed cement to 18.1 ppg. Slurry temperature: 80°F. Held 200 psi back pressure throughout job. Mix water temperature: 140°F. Casing and liner cement job proceeded smoothly. Pulled one stand and one single wet at end of job.

Jim Brown
Foreman



SEABEE TEST WELL No. 1

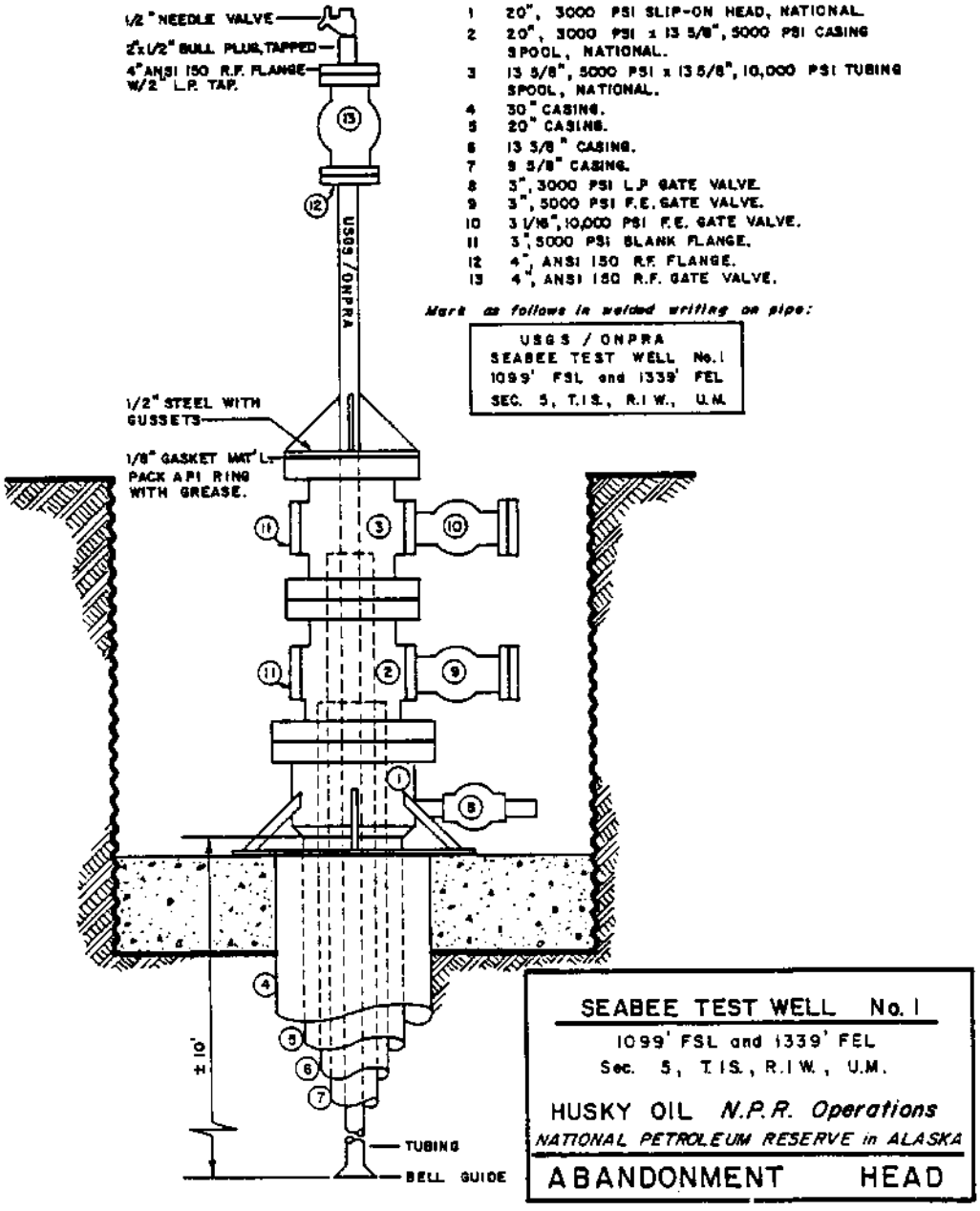
1099' FSL and 1339' FEL

Sec. 5, T.1 S., R.1 W., U.M.

HUSKY OIL *N.P.R. Operations*

NATIONAL PETROLEUM RESERVE in ALASKA

WELLBORE SCHEMATIC



Part No.	EQUIPMENT LIST
1	20", 3000 PSI SLIP-ON HEAD, NATIONAL.
2	20", 3000 PSI x 13 5/8", 5000 PSI CASING SPOOL, NATIONAL.
3	13 5/8", 5000 PSI x 13 5/8", 10,000 PSI TUBING SPOOL, NATIONAL.
4	30" CASING.
5	20" CASING.
6	13 3/8" CASING.
7	9 5/8" CASING.
8	3", 3000 PSI L.P. GATE VALVE.
9	3", 5000 PSI F.E. GATE VALVE.
10	3 1/16", 10,000 PSI F.E. GATE VALVE.
11	3", 5000 PSI BLANK FLANGE.
12	4", ANSI 150 R.F. FLANGE.
13	4", ANSI 150 R.F. GATE VALVE.

Mark as follows in welded writing on pipe:

USGS / ONPRA
SEABEE TEST WELL No. 1
1099' FSL and 1339' FEL
SEC. 5, T. 1 S., R. 1 W., U.M.

SEABEE TEST WELL No. 1
1099' FSL and 1339' FEL
Sec. 5, T. 1 S., R. 1 W., U.M.
HUSKY OIL *N.P.R. Operations*
NATIONAL PETROLEUM RESERVE in ALASKA
ABANDONMENT HEAD

RIG INVENTORY

THE FOLLOWING INVENTORY DOES NOT INCLUDE THESE ADDITIONAL ITEMS:

Mud System

Additional pit to bring active system to 1,000 barrels.

Hoisting and Pipe Handling System

40 joints of heavy-wall drill pipe.
"Iron Roughneck" or equivalent.
7000' of 5" Grade "G" drill pipe.
Blocks, hook, swivel, and rotary replaced with increased capacity units (500 tons).

Other

Forklift
20" blowout-preventer ram stack.

RIG INVENTORY

Draw Works

National 110, Serial No. T1866, grooved for 1-3/8" line. Equipped with Fluid Brake Company auxiliary brake, Model S501A, Serial No. 114-50; Crown-O-Matic Model TCB crown stopper; and National Micro-Matic automatic driller.

Rig Drive

National BT3, 3 section drive with 2 pump drives.

Engines

Three Caterpillars, D398, with National C300 torque converters. Engines equipped with heat exchangers and waste heat recovery system in substructure. Horsepower rating without fans, approximately 800 HP each.

Pumps

No. 1 - Emsco F1000 Triplex driven by compound.
No. 2 - National G1000, Serial No. 8298, with H1250 fluid end.

Substructure

Lee C. Moore Corporation
Overall length - 56.10'
Overall width - 23.00'
Floor height - 20.30'
Motor height - 16.30.'

Mast

Lee C. Moore Corporation, Serial No. T 3013.
1,025,000 lb. GNC

Blocks

National Model 548-F300 block hook assembly, grooved for 1-3/8" line, 300 ton capacity (Emsco RA 52-6-H500).

Swivel

National Type R, Serial No. T2985 with R.B. type washpipe and packing (Emsco LB 500).

Rotary Table

Ideco, Model HS-275, 27-1/2", Serial No. 101 (Emsco T3750, 37-1/2).

Tongs

B. J., Type B.

Kelly bushings - Varco H.D. square drive.

Accumulator

Koomey, Model T, 20160-3S, Serial No. 4899, 3,000 lb. wp with sixteen 10-gallon Greer hydraulic bottles.

Blowout Preventers

1 - 13-5/8", 5,000 lb. Hydril, Model GK, Serial No. 5103.

1 - 13-5/8", 5,000 lb. double Shaffer, Serial No. 2145.

1 - 13-5/8", 5,000 lb. single Shaffer, Serial No. 486-LA 80.

1 - 20", 2,000 lb. Hydril.

Boilers

2 - Williams and Davis, 150 HP oil-fired boilers.

Mud Tanks

No. 1 - 30' x 8' x 5' 8" deep with four low-pressure guns, two high-pressure guns, and Rumba dual shale shakers.

No. 2 - 30' x 8' x 5' 8" deep with two low-pressure guns, two high-pressure guns, and one 5 hp lightening mixer.

No. 3 - 40' x 8' x 5' 8" deep with two low-pressure guns, three high-pressure guns, 5 hp lightening mixer.

No. 4 - 30' x 9' x 5' 8" deep pre-mix tank with two mud hoppers and 5" x 6" mixing pump.

No. 5 - 30' x 8' x 5' 8" with lightening mixer.

Degasser

Clark Gas Hog, Serial No. 17.

Desander

Demco Model 123 with three 12" cones.

Desilter

Swaco Model 6T4 156 with twelve 4" cones.

Light Plants

Two Caterpillar, D3798, 400 kw generator sets and necessary distribution system.

Overshots

1 - 10-5/8" Bowen Model 150, maximum catch 9".

1 - 7-5/8" OD Bowen Model 150, maximum catch 6-1/2".

Water-Fuel Tanks

2 - Combination water fuel tanks. Approximate capacity: 800 bbls. water; 16,000 gals. fuel.

Drill Collars

20 approximately 7-3/4" OD x 2-7/8" ID drill collars with 6-5/8" regular connections.

Drill Pipe

100 joints, 5", 19.50 lb., Grade G drill pipe.

Five inch, 19.50 lb., Grade E pipe as needed.

(Extra pipe as required for deep well.)

Air Heater

1 - 4,200,000 BTU air heater.

Iron Roughneck

Varco Model 50.