

GLACIER ET AL HARE
INDIAN No. 1 H-48

Drilling Authority No.
Date Issued

WELL NAME Glacier et al. Bare Indian No. 1 H-46
FIELD dildoot Area: Port Good Hope
LOCATION: Unit 4 Section 21 Grid 60-2-22-20
Latitude 66°17'03" N. Longitude 121°37'13" W.
From Established Reference Marker

Rig Release Date: 27-9-60
Status D & A
Information Release Date 27-9-62

CHANGE OF NAME:

DATE RECEIVED	INDEX
	Application for a Drilling Authority. Well Completion Data. Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well. Well History Supplement. Well Completion Data. Work-over Report No.
	Application to Commingle Production before Measurement.
	Approval to Commingle Production before Measurement.
	Application to Amend Approval No. to Commingle Production before Measurement.
	Application for M.P.R.—Oil.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Field Abandonment Programme and Approval.
	Well Card.
	Well Visit.
	Daily Drilling Reports.

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NORTHERN ADMINISTRATION BRANCH

RESOURCES DIVISION

For the period from

to September 27, 1960

REPORT of ~~PRODUCTION~~
~~TEST~~
~~ABANDONMENT~~ of a Well
~~ABANDONMENT~~

Permit No. 1534..

Name of well Glacier Bayeal Climax Hare Indian Structure . Lease No.
Test No. 1

Registered owner Glacier Explorers Limited Drilling Company Big Indian Drilling Co. Ltd.

Location . . . 66° 17' 23" N. Lat. 128° 37' 30" W. Long.

Survey description, if available East bank of Mackenzie River, 1,900 feet south of
mouth of Hare Indian River

Elevation: Ground . 144' Last previous depth

Kelly bushing . 148' Present depth 555'

Spudded . September 24, 1960 Finished drilling Sept. 27/60 Big Released
September 27, 1960

Deviations from vertical . . . 1 1/2° at 550'

CASING RECORD

Date	Size O.D.	Weight lbs/ft	Grade	Set at feet	Sacks Cement	Top of Cement
1 . . .	M11 . . .					
2 . . .						
3 . . .						
4 . . .						

TUBING RECORD

Size	Wt. Lbs/foot	Grade	Amount	Landed Depth	Remarks
M11 . . .					
.					
Wellhead		(Manufacturer)	(Size)	(Series)	

Status of well on completion of drilling . To be abandoned

Producing Zone . . . M1 and formation

Injection Zone . . . M1

Cord intervals . . . M1

.

.

.

Interval logged: E-log 552' to surface . . Other logs

R-log . . . -

M-log . . . -

Velocity log -

The above logs (are) ~~(will be)~~ submitted in accordance with Section 65 of the Regulations.

DRILL STEM TESTS

<u>Test No.</u>	<u>Date</u>	<u>Interval Tested</u>	<u>Duration</u>	<u>Results</u>
. <u>M1</u> . .				
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(If space insufficient, attach further sheet)

(Strike out the non-applicable) (Completion) (Rework) (Recompletion)

Perforations Bullet.

.

Shootings

Hydraulic fracturing

Chemical treatment

Date initial production tests

Initial production data

Pumping or flowing
Plug back
Other
.
.
.
.

CEMENT PLUGS SET

<u>Date</u>	<u>Plug set at</u>	<u>Sacks cement</u>	<u>Method</u>	<u>Top found at</u>
.				
.				
.				
.				
.				

Washed well samples have been sent to Geological Survey of Canada, Calgary
~~withhold~~

Cores will be stored at
Core analysis (was made) of the intervals
(to be made)
Oil analysis (was made) of the Intervals.
(to be made)
Gas analysis (was made) of the Intervals.
(to be made)
Water analysis (was made) of the Intervals.
(to be made)
The above analyses (are)
(will be) submitted in accordance with Section 70(2) of
the Regulations.

ADDITIONAL DETAILS AND COMMENTS

.
.
.
.
.

.
Signed *Norman Soul*, P. Geol.
Signed J. C. Sproule & Associates Ltd. Address 1009--4th Ave. S.W., . . .
Calgary, Alberta.
Date November 13, 1960.

(To be submitted in triplicate in accordance with Sections
63, 69, 70 and 71, of the Territorial Oil and Gas Regulations
to the Oil Conservation Engineer at Calgary, Alberta.)

FORM "A"

C A N A D A

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NORTHERN ADMINISTRATION BRANCH

RESOURCES DIVISION

~~NOTICE OF INTENTION TO BEGIN DRILLING A WELL ON OIL AND GAS PERMIT NO. 1534~~

or

TO CARRY OUT A STRUCTURE TEST PROGRAM

In accordance with Section ⁵⁷ ~~23~~ of the ^{Canada} ~~Unconsolidated~~ Oil and Gas Regulations, notice is hereby given of our intention to begin drilling a well on Oil and Gas Permit No. 1534 . . . registered in the name of Lease No.

TYPE OF WELL:

Wildcat Structure Test

~~Development~~

Expected total depth . . 450 feet, in the Lower Limestone Member of the Pamparts formation of Middle Devonian age.

The well will be located at 66° 37' 21" N. Lat 128° 17' 36" W. Long. approx.

. . 14,800' . . (~~North of boundary~~) (Permit No. . . 1534)
(S. of N. boundary) of (Lease No.)
. . 18,000 . . (W. of E. boundary) of (Permit No. . . 1534)
(~~South of boundary~~) (Lease No.)

Survey description of Location, if known . . Unsurveyed

. Located on the south bank of the Hare Indian River at the confluence of the Hare Indian and Mackenzie Rivers.
Approximate surface elevation of . . . 100 . . . feet above sea level.

Name of well . Glacier Bayel-Climax Hare Indian Structure Test No. 1. .

Type of drilling rig Rotary

Expected date of commencement . 22nd October, 1960

We propose to use the following strings of casing, cementing them as indicated below:

Size O.D. Inches	Weight lbs/ft	Grade	Brand	New or Used	Estimated Depth	Sacks of Cement
1. Nil . . .						
2.						
3.						

Expected depth of water, gas and oil horizons and method of control:

... ~~Nil~~ ...
...
...
...

An electric log ~~will~~ be run Other logs ~~will~~ be run
~~will not~~ ~~will not~~

STRUCTURE TEST PROGRAM

Proposed number of holes . . . 1 . . . Maximum well depth . . 600 . . .
enclosed within an area bounded by

. 66° 37' 24" N. Latitudes
. 128° 17' 36" W. Longitudes

An electric log ~~will~~ be run Other logs ~~will~~ be run
~~will not~~ ~~will not~~

Name and address of drilling contractor . . Big Indian Drilling Co. Ltd., .
. . 513 - Eighth Avenue S. W. . . .
. . Calgary, Alberta
...

Responsible agents of permittee or lessee in charge of operation:

Norman Soul
At well c/o J.C. Sproule & Associates Postal address Port Good Hope, N. W. T.
At registered 1009 Fourth Avenue S. W.,
office . . J. C. Sproule & Associates Postal address Calgary, Alberta, . . .

It is understood that if changes in this Notice of Intention become necessary we will promptly notify you.

Dated at . Calgary. this . . 26 day of . September . . 19 60 . . .

Signed by *J. R. Harding* . . .

This program is approved subject to the following provisions (if any):
J. C. SPROULE AND ASSOCIATES LTD.

. . Confirming oral approval that this structure test might be drilled . .
. . if weather conditions permitted.
...
...
...

27th September, 1960.
Date

B. H. Shoms
Oil Conservation Engineer.

(To be submitted in triplicate to the Oil Conservation Engineer at least 15 days prior to the commencement of drilling)



File No.
Drilling Authority No. 88

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

WELL-SITE INSPECTION REPORT

FROM: Field Office or Area: Norman Wells Date: 11th July 1971

TO: The Oil Conservation Engineer:

RE: Glacier et al Hare Indian No. 1

Location: 66°17'23"N., 128°17'30"W. Status: D & A September 1960

This location was inspected by the undersigned on 11th July 1971

The location is in ~~satisfactory~~/unsatisfactory condition. T.D. 555'

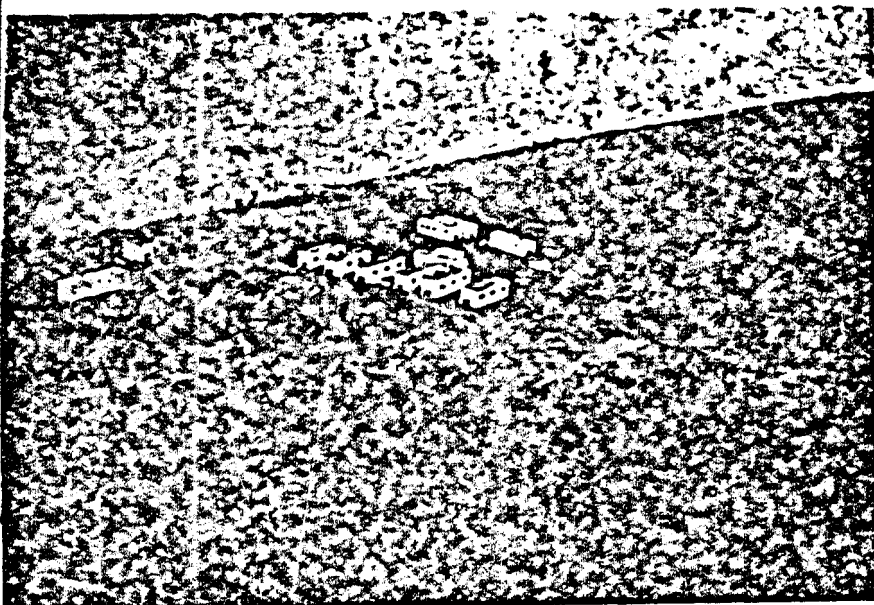
The following items require attention:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

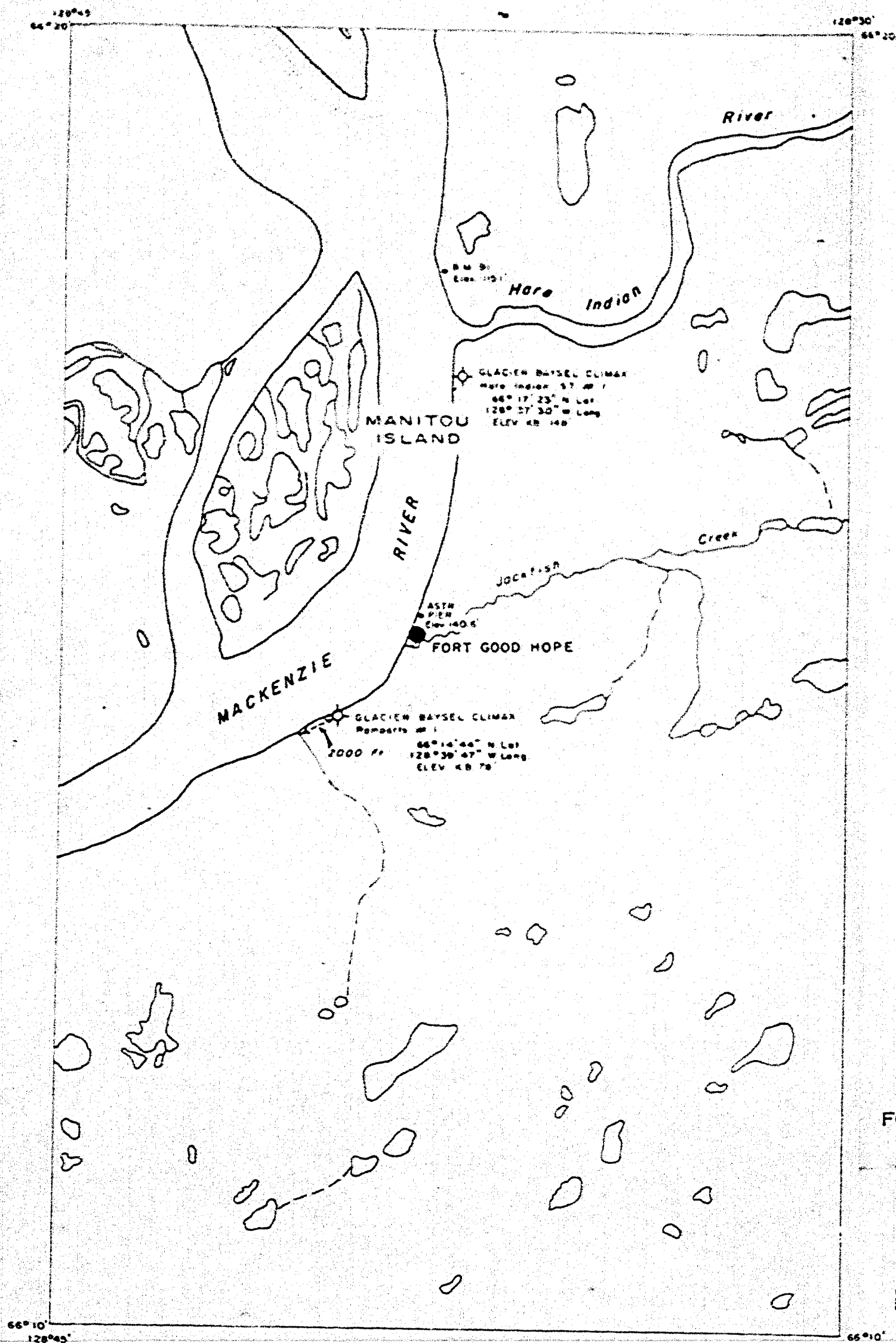
Other comments and recommendations: (Include Map, if necessary for clarity)

Raining heavily

Could not locate physical well. Site visited was immediately adjacent to river and being used as landing and storage site. Is this the correct site? Please advise.



Inspected by *M. D. Thomas*
M. D. Thomas
District 2



P.B.N.G. PERMIT 1534
FORT GOOD HOPE AREA, N.W.T.

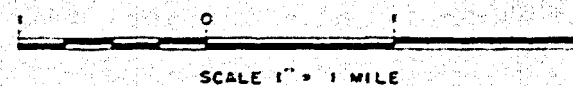
SHOWING LOCATION OF

GLACIER BAYSEL CLIMAX

Ramparts #1

and

HARE INDIAN ST. #1



I certify that this plan is correct

Norman Paul

Calgary, Nov. 16, 1960. N. Soul, P. Geol.

GEOLOGICAL AND ENGINEERING REPORT

GLACIER BAYSEL CLIMAX HARE INDIAN STRUCTURE TEST No. 1

FORT GOOD HOPE AREA, NORTHWEST TERRITORIES

C. C. Sproule and Associates Ltd.

OIL AND GAS ENGINEERING AND GEOLOGICAL CONSULTANTS

CALGARY, ALBERTA

GEOLOGICAL AND ENGINEERING REPORT
GLACIER BAYSEL CLIMAX HARE INDIAN STRUCTURE TEST NO. 1
FORT GOOD HOPE AREA, NORTHWEST TERRITORIES

J. C. SPROULE AND ASSOCIATES LTD.
OIL AND GAS ENGINEERING AND GEOLOGICAL CONSULTANTS

1009 FOURTH AVENUE WEST
CALGARY - ALBERTA

TELEPHONE
AMHERST 9-7951

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ENGINEERING AND GEOLOGICAL SUMMARY	7
 LOGS	
Electric Log - Electronic Logging & Velocity Co. Ltd.	In pocket
Visual Well Log	In pocket

ILLUSTRATION

Map showing P. & N. G. Permit 1534, Fort Good Hope Area, N. W. T., showing location of Glacier Bayseel Climax Ramparts No. 1 and Hare Indian S.T. No. 1	In pocket
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SUMMARY OF PERTINENT WELL DATA

Well Name: Glacier Baysel Climax Hare Indian Structure Test No. 1
Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.
Elevation: Ground 144'
K. B. 148'
Total Depth: 555'
Operator: Glacier Explorers Limited
Technical Supervision: J. C. Sproule and Associates Ltd.
Norman Soul, Geologist
Drilling Contractor: Big Indian Drilling Co. Ltd.
Spudded: September 24, 1960
Completed: September 27, 1960
Status: Abandoned

<u>Geological Markers:</u> <u>Marker</u>	<u>Depth</u> Feet	<u>Elevation</u> Feet
Base of Gravel	50	+98
Middle Ramparts	50	+98
Lower Ramparts	540	-392
Total Depth	555	-407

Drilling Data:

<u>Hole Size</u> Inches	<u>Depth</u>	
	<u>From</u> Feet	<u>To</u> Feet
4 3/4	Surface	555

Deviation Survey: 1 1/2° at 550'.

Log: Electronic Logging & Velocity Co. Ltd. electric log from 552 feet to surface.

DAILY CHRONOLOGICAL WELL REPORT

Well Name: Glacier Bayseel Climax Hare Indian Structure Test No. 1
Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.
Ending 12:00 midnight.

<u>Date</u>	<u>Total Depth Feet</u>	<u>Progress Feet</u>	<u>Days</u>	<u>Remarks</u>
September 24	20	16	1	Big Indian Drilling Co. Ltd. Rig No. 5, Mayhew 1500, spudded at 8:00 p.m. Drilling 4 3/4" hole with Bit No. 1.
September 25	305	285	2	Drilled to 50' at 6:00 a.m. with Bit No. 2. Drilled to 60' at 11:00 a.m. with Bit No. 3. Drilling with Bit No. 4.
September 26	555	250	3	Drilled to 366' at 3:30 a.m. with Bit No. 4. Drilled to 541' at 2:40 p.m. with Bit No. 5. Drilled to 555' at 11:45 p.m. with Bit No. 6. Pulling out and laying down pipe.
September 27	555	-	4	Finished pulling out and laying down pipe at 12:15 a.m. Ran Electronic Logging & Velocity Co. Ltd. electric log from 552' to surface. Ran deviation survey at 550'. Abandoned hole and moved off location.

BIT RECORD

Well Name:

Glacier Bayseel Climax Hare Indian Structure Test No. 1

Location:

66° 17' 23" N. Lat.
128° 37' 30" W. Long.

<u>No.</u>	<u>Make</u>	<u>Type</u>	<u>Size</u> <u>Inches</u>	<u>Depth</u>		<u>Footage</u>	<u>Hours</u>
				<u>From</u> <u>Feet</u>	<u>To</u> <u>Feet</u>		
1	W. M.	WM1	4 3/4	Surface	20	16	4
2	Varel	V3	4 3/4	20	50	30	6
3	Varel	V3	4 3/4	50	60	10	4 1/4
4	Varel	Drag	4 3/4	60	366	306	16 1/2
5	Varel	Drag	4 3/4	366	541	175	9 3/4
6	Williams	K2	4 3/4	541	556	15	6 3/4

MUD RECORD

Well Name: Glacier Bayel Climax Hare Indian Structure Test No. 1

Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.

<u>Date</u>	<u>Depth</u>		<u>Weight</u>	<u>Viscosity</u>	<u>Water Loss</u>	<u>Additives</u>
	<u>From Feet</u>	<u>To Feet</u>				
September 24	Surface	20	-	-	-	Gel 600 lbs.
September 25	20	305	-	-	-	Gel 900 lbs.
September 26	305	555	-	-	-	-

DRILLING TIME RECORD

Well Name: Glacier Bayel Climax Hare Indian Structure Test No. 1

Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.

Drilling time in minutes per five feet.

<u>Depth</u> Feet	<u>Time In Minutes</u>
400-450	19, 14, 19, 15, 20, 16, 17, 13, 13, 5.
450-500	5, 14, 15, 9, 18, 14, 5, 27, 6, 8.
500-545	9, 20, 6, 11, 9, 33, 27, 43, 46*.

Drilling time in minutes per foot.

<u>Depth</u> Feet	<u>Time In Minutes</u>
545-555	4, 6, 5, 13, 34, 40, 51, 57, 59, 51.

* Bit change.

SAMPLE DESCRIPTION

Well Name: Glacier Baysel Climax Hare Indian Structure Test No. 1

Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.

<u>Depth</u> <u>Feet</u>	<u>Description</u>
Surface-50	Outwash consisting of gravel, sand and clay. Thickness of permafrost not established but apparently does not exceed 30 feet.

MIDDLE DEVONIAN

Ramparts Formation

Middle Shale Member

50-485	Shale, greenish grey to medium grey, calcareous, silty in part.
485-510	Shale, dark brown to black, bituminous, abundant brown fossil resin, pyritic, fossiliferous, slightly calcareous to non-calcareous.
510-525	Shale, dark grey and dark brownish grey, non-calcareous.
525-540	Shale, dark brown to black, hard, bituminous, fossiliferous, limy, pyritic, slickensided.

Lower Limestone Member

540-555	Limestone, buff to dark brown, dense to finely crystalline, in part slightly siliceous, traces of bluish grey chert, slightly argillaceous, traces of fossils, slightly pyritic.
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ENGINEERING AND GEOLOGICAL SUMMARY

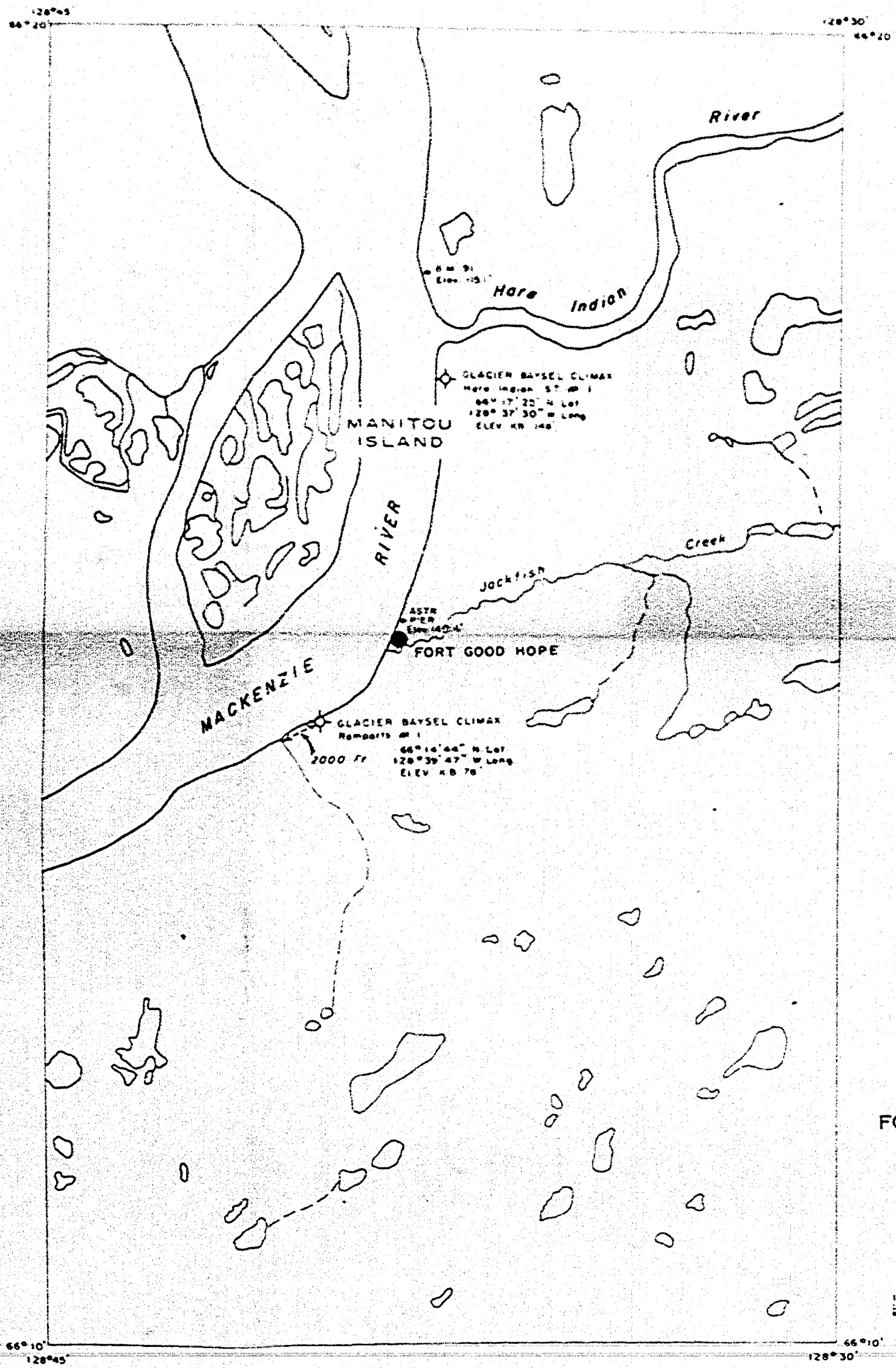
Well Name: Glacier Baysel Climax Hare Indian Structure Test No. 1
Location: 66° 17' 23" N. Lat.
128° 37' 30" W. Long.

Glacier Baysel Climax Hare Indian Structure Test No. 1 was drilled as a shallow structure test and was the third well in the program undertaken on Permits held in the name of Glacier Explorers Limited in the Fort Good Hope area, Northwest Territories. The well site is on the east bank of the Mackenzie River, 1,900 feet south of the confluence of the Hare Indian and Mackenzie Rivers and about 35 feet above river level.

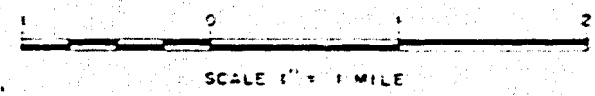
No surface casing was set in this well as the object was to establish the top of the Lower Limestone member of the Ramparts formation as cheaply as possible. Bedrock was reached at 50 feet and the Middle Shale member (Hare Indian formation) of the Middle Devonian Ramparts formation was found to be 490 feet thick at this location. The Lower Limestone member was penetrated from 540 to 555 feet and the well was logged and abandoned.

Norman Soul
Norman Soul, P. Geol.

1009 Fourth Avenue S. W.,
Calgary, Alberta.
October 20, 1960.



P.B.N.G. PERMIT 1534
 FORT GOOD HOPE AREA, N.W.T.
 SHOWING LOCATION OF
GLACIER BAYSSEL CLIMAX
Ramparts #1
 and
HARE INDIAN ST #1



COMPANY J.C. SPROULE & ASSOCIATES

DAILY REPORT

DATE SEPT. 27 1960BOARD COPY
(TO BE SENT TO BOARD
FIELD OFFICE)CONTRACTOR DIG INDIAN DRILL RIG No. 5 Licensed Well Name & Location GLACIER BASSE-CLIMAX HARE INDIAN RIVER #1 K. B. Elev. _____

	FIRST TOUR 12:00 p.m. — 8:00 a.m.								SECOND TOUR 8:00 a.m. — 4:00 p.m.								THIRD TOUR 4:00 p.m. — 12:00 p.m.																																		
DEPTH	Start of Tour		Hole Made This Tour				End of Tour		Start of Tour		Hole Made This Tour				End of Tour		Start of Tour		Hole Made This Tour				End of Tour																												
TIME	On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom																												
BIT RECORD	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.																											
DRILL PIPE	Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.							Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.							Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.																					
MUD RECORD	Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind							Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind							Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind																		
CORING	Time	Interval		Ft. Cut		Ft. Rec'd		Type							Time	Interval		Ft. Cut		Ft. Rec'd		Type							Time	Interval		Ft. Cut		Ft. Rec'd		Type															
SURVEY	Depth	Degrees Off		Depth		Degrees Off								Depth	Degrees Off		Depth		Degrees Off								Depth	Degrees Off		Depth		Degrees Off																			
CASING & CEMENTING DETAILS	Size	Amount		Set at K.B.		Wt./Ft.		New/Used		Grade		Cubic Feet of Mix (Dry Volume)		Type of Cementing Material		ADDITIVES Including Ratio or Percentage		Slurry Weight Lb./Gal.																																	
PERFORATING	Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type							Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type																																	
ACIDIZING or FLUORINATING	Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.							Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.							Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.																					
FORMATION TESTS	No.	Interval Tested		to		min.		Shut in		mins.								No.	Interval Tested		to		min.		Shut in		mins.								No.	Interval Tested		to		min.		Shut in		mins.							
	Valve Open		min.		Shut in		mins.		Mcf/d Max.								Valve Open		min.		Shut in		mins.		Mcf/d Max.								Valve Open		min.		Shut in		mins.		Mcf/d Max.										
	Gas to Surface		min.		@		Bbl/d Max.								Gas to Surface		min.		@		Bbl/d Max.								Gas to Surface		min.		@		Bbl/d Max.																
	Oil to Surface		min.		@		Bbl/d Max.								Oil to Surface		min.		@		Bbl/d Max.								Oil to Surface		min.		@		Bbl/d Max.																
	Recovery:		ft.												Recovery:		ft.												Recovery:		ft.																				
			ft.														ft.														ft.																				
			ft.														ft.														ft.																				
ABANDONMENT PLUGS	No.	Interval	Cement	Additive	Plug Down	Felt At	Time							No.	Interval	Cement	Additive	Plug Down	Felt At	Time							No.	Interval	Cement	Additive	Plug Down	Felt At	Time																		
LOGS	Type <u>ELECTROLOG</u> Int. <u>0-555</u>								Type _____ Int. _____								Type _____ Int. _____																																		
REMARKS	<u>1200-1215 PULLING OUT & RAVING</u>																																																		
	<u>DRAWN PIPE</u>																																																		
	<u>1215-200 LOGGING</u>																																																		
	<u>200-800 TAPPING OUT - Abandoning hole</u>																																																		
	Operator _____ Driller <u>PETERS</u>								Operator _____ Driller _____								Operator _____ Driller _____																																		

COMPANY J.C. SPROUE & ASSOCIATES

DAILY REPORT

DATE SEPT 26, 1960BOARD COPY
(TO BE SENT TO BOARD
FIELD OFFICE)CONTRACTOR BIG INDIAN DRILLING RIG No. 5 Licensed Well Name & Location GLACIER BAYSEL CLIMAX NARE INDIAN RIVER #1 K. B. Elev. _____

	FIRST TOUR 12:00 p.m. — 8:00 a.m.								SECOND TOUR 8:00 a.m. — 4:00 p.m.								THIRD TOUR 4:00 p.m. — 12:00 p.m.										
	Start of Tour		Hole Made This Tour				End of Tour		Start of Tour		Hole Made This Tour				End of Tour		Start of Tour		Hole Made This Tour				End of Tour				
DEPTH	305		120				425		425		116				541		541		14.5				555.5 T.D.				
TIME	On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom				
BIT RECORD	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.			
	4 3/4	4	DRAG				16 1/2		4 3/4	5	DRAG					17 1/2	10	4 3/4	6	K2	NEW			14.5	6 3/4		
DRILL PIPE	Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.			Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.			Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.					
MUD RECORD	Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind		Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind		Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind				
CORING	Time	Interval		Ft. Cut		Ft. Rec'd		Type	Time	Interval		Ft. Cut		Ft. Rec'd		Type	Time	Interval		Ft. Cut		Ft. Rec'd		Type			
SURVEY	Depth	Degrees Off		Depth		Degrees Off			Depth	Degrees Off		Depth		Degrees Off			Depth	Degrees Off		Depth		Degrees Off					
CASING & CEMENTING DETAILS	Size	Amount		Set at K.B.		Wt./Ft.			Size	Amount		Set at K.B.		Wt./Ft.			Size	Amount		Set at K.B.		Wt./Ft.					
PERFORATING	Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type		Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type		Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type				
ACIDIZING or FLUORINATING	Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.		Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.		Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.		Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.
FORMATION TESTS	No.	Interval Tested		to				No.	Interval Tested		to				No.	Interval Tested		to									
	Valve Open	min.		Shut in		mins.		Valve Open	min.		Shut in		mins.		Valve Open	min.		Shut in		mins.							
	Gas to Surface	min.		@		Mcf/d Max.		Gas to Surface	min.		@		Mcf/d Max.		Gas to Surface	min.		@		Mcf/d Max.							
	Oil to Surface	min.		@		Bbl/d Max.		Oil to Surface	min.		@		Bbl/d Max.		Oil to Surface	min.		@		Bbl/d Max.							
	Recovery:	ft.						Recovery:	ft.						Recovery:	ft.											
		ft.							ft.							ft.											
ABANDONMENT PLUGS	No.	Interval	Cement	Additive	Plug Down	Felt At	Time	No.	Interval	Cement	Additive	Plug Down	Felt At	Time	No.	Interval	Cement	Additive	Plug Down	Felt At	Time						
LOGS	Type	Int.							Type	Int.							Type	Int.									
REMARKS	12:00 - 5:00 DRILLING																										
	5:00 - 8:00 TRIPPING																										
	8:00 - 11:00 DRILLING																										
	11:00 - 12:00 TRIPPING																										
	12:00 - 1:00 DRILLING																										
1:00 - 4:00 TRIPPING																											
4:00 - 5:00 DRILLING																											
5:00 - 11:45 DRILLING																											
11:45 - 12:00 PULLING OUT & LAYING DOWN PIPE																											
Operator _____ Driller <u>PETERS</u>																											
Operator _____ Driller <u>HUMBKE</u>																											
Operator <u>HUMBKE</u> Driller <u>PETERS</u>																											

Form FD-14.
COMPANY J.C. SPROULE & ASSOCIATES

DAILY REPORT

DATE SEPT. 25, 1960

BOARD COPY
(TO BE SENT TO BOARD
FIELD OFFICE)

COMPANY GLACIER BAKEL CLIMAX HARE INDIAN #1

CONTRACTOR BIG INDIAN DRILL RIG No. 5 Licensed Well Name & Location GLACIER BAKEL CLIMAX HARE INDIAN #1 K. B. Elev. 1200

CONTRACTOR DRILLING INDIAN PRS							RIG NO. 9							LICENSED WITH NAME & LOCATION															
FIRST TOUR 12:00 p.m. — 8:00 a.m.										SECOND TOUR 8:00 a.m. — 4:00 p.m.										THIRD TOUR 4:00 p.m. — 12:00 p.m.									
		Start of Tour		Hole Made This Tour		End of Tour				Start of Tour		Hole Made This Tour		End of Tour				Start of Tour		Hole Made This Tour		End of Tour							
DEPTH		20		30		50				50		70		120				120		185		305							
		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom		On Bottom		Off Bottom					
TIME																													
		Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.	Size	No.	Type	Condition	Wt.	R.P.M.	Ft. Drilled	Bit-hrs.				
BIT RECORD		4 3/4	2	V3	NEW			30	6	4 3/4	3	V3					4 3/4	4 3/4	4	DRAG					13				
		4 3/4	3	V3	NEW				1 1/4	4 3/4	4	DRAG	NEW				5												
		Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.			Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.			Size	Stands	Singles	Drill Collar	Kelly	Core Bbl.						
DRILL PIPE																													
		Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind		Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind		Time	Weight	Vis.	Gel Str.	pH	Am't Added	Kind					
MUD RECORD							900	GEL																					
		Time	Interval	Ft. Cut	Ft. Rec'd	Type				Time	Interval	Ft. Cut	Ft. Rec'd	Type				Time	Interval	Ft. Cut	Ft. Rec'd	Type							
CUTTING																													
		Depth	Degrees Off	Depth	Degrees Off					Depth	Degrees Off	Depth	Degrees Off	Depth	Degrees Off			Depth	Degrees Off	Depth	Degrees Off								
SURVEY		Size	Amount	Set at K.B.	Wt./Ft.					New/Used	Grade	Cubic Feet of Mix (Dry Volume)	Type of Cementing Material	ADDITIVES Including Ratio or Percentage	Slurry Weight Lb./Gal.														
CASING & CEMENTING DETAILS																													
		Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type			Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type			Interval	Shot/Ft.	Type	Interval	Shot/Ft.	Type						
PERFORATING																													
		Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.			Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.			Interval	Amount Gals.	Kind	Breakdown Press.	Final Press.	Feed Rate Bbls./Min.						
ACIDIZING or FRACING																													
		No.	Interval Tested	to	min.	Shut in	mins.			No.	Interval Tested	to	min.	Shut in	mins.			No.	Interval Tested	to	min.	Shut in	mins.						
FORMATION TESTS		Valve Open								Valve Open								Valve Open											
		Gas to Surface	min.	@	Mcf/d Max.					Gas to Surface	min.	@	Mcf/d Max.					Gas to Surface	min.	@	Mcf/d Max.								
		Oil to Surface	min.	@	Bbl/d Max.					Oil to Surface	min.	@	Bbl/d Max.					Oil to Surface	min.	@	Bbl/d Max.								
		Recovery:	ft.							Recovery:	ft.							Recovery:	ft.										
			ft.								ft.								ft.										
			ft.								ft.								ft.										
		No.	Interval	Cement	Additive	Plug Down	Felt At	Time		No.	Interval	Cement	Additive	Plug Down	Felt At	Time		No.	Interval	Cement	Additive	Plug Down	Felt At	Time					
ABANDONMENT PLUGS																													
LOGS		Type	Int.							Type	Int.							Type	Int.										

Form ED-19.
COMPANY J. C. Smalls & Associate

DAILY REPORT

DATE Sept 24/60

BOARD COPY
(TO BE SENT TO BOARD
FIELD OFFICE)

CONTRACTOR Reg Indian RIG No. 5 Licensed Well Name & Location GLACIER DAVSEL CLIMAX HARB INDIAN #1 K. B. Elev. _____

CONTRACTOR							RIG NO.							LICENSED WELL NAME & LOCATION												
FIRST TOUR									SECOND TOUR									THIRD TOUR								
12:00 p.m. — 8:00 a.m.									8:00 a.m. — 4:00 p.m.									4:00 p.m. — 12:00 p.m.								
Start of Tour			Hole Made This Tour			End of Tour			Start of Tour			Hole Made This Tour			End of Tour			Start of Tour			Hole Made This Tour			End of Tour		
DEPTH																		0 20 20								
TIME																										
On Bottom Off Bottom On Bottom Off Bottom									On Bottom Off Bottom On Bottom Off Bottom									On Bottom Off Bottom On Bottom Off Bottom								
BIT RECORD																										
Size No. Type Condition Wt. R.P.M. Ft. Drilled Bit-hrs.									Size No. Type Condition Wt. R.P.M. Ft. Drilled Bit-hrs.									Size No. Type Condition Wt. R.P.M. Ft. Drilled Bit-hrs.								
																		434 1 W.M.I NEW 20 4								
DRILL PIPE																										
Size Stands Singles Drill Collar Kelly Core Bbl.									Size Stands Singles Drill Collar Kelly Core Bbl.									Size Stands Singles Drill Collar Kelly Core Bbl.								
MUD RECORD																										
Time Weight Vis. Gel Str. pH Am't Added Kind									Time Weight Vis. Gel Str. pH Am't Added Kind									Time Weight Vis. Gel Str. pH Am't Added Kind								
																		600 GEL								
CORING																										
Time Interval Ft. Cut Ft. Rec'd Type									Time Interval Ft. Cut Ft. Rec'd Type									Time Interval Ft. Cut Ft. Rec'd Type								
SURVEY																										
Depth Degrees Off Depth Degrees Off									Depth Degrees Off Depth Degrees Off									Depth Degrees Off Depth Degrees Off								
Casing & Cementing Details																										
Size Amount Set at K.B. Wt./Ft.									New/Used Grade Cubic Feet of Mix (Dry Volume)									Type of Cementing Material ADDITIVES Including Ratio or Percentage Slurry Weight Lb./Gal.								
PERFORATING																										
Interval Shot/Ft. Type Interval Shot/Ft. Type									Interval Shot/Ft. Type Interval Shot/Ft. Type									Interval Shot/Ft. Type Interval Shot/Ft. Type								
ACIDIZING or FLUORINATING																										
Interval Amount Gals. Kind Breakdown Press. Final Press. Feed Rate Bbls./Min.									Interval Amount Gals. Kind Breakdown Press. Final Press. Feed Rate Bbls./Min.									Interval Amount Gals. Kind Breakdown Press. Final Press. Feed Rate Bbls./Min.								
FORMATION TESTS																										
No. Interval Tested to									No. Interval Tested to									No. Interval Tested to								
Valve Open min. Shut in mins.									Valve Open min. Shut in mins.									Valve Open min. Shut in mins.								
Gas to Surface min. @ Mcf/d Max.									Gas to Surface min. @ Mcf/d Max.									Gas to Surface min. @ Mcf/d Max.								
Oil to Surface min. @ Bbl/d Max.									Oil to Surface min. @ Bbl/d Max.									Oil to Surface min. @ Bbl/d Max.								
Recovery: ft.									Recovery: ft.									Recovery: ft.								
ABANDONMENT PLUGS																										
No. Interval Cement Additive Plug Down Felt At Time									No. Interval Cement Additive Plug Down Felt At Time									No. Interval Cement Additive Plug Down Felt At Time								
LOGS																										
Type Int.									Type Int.									Type Int.								
									6:00 A.M. - 4:00 P.M. MOVING TO NEW LOCATION AND UNLOADING EQUIPMENT									400-800 SETTING UP 800-1200 SPUD IN DRILLING IN GRAVEL								
REMARKS																										
Operator Driller									Operator Driller HUMBKE									Operator HUMBKE Driller PETERS								