M-43-A

Drilling Authority No. 487

Date Issued 18 January 1971

WELL NAME Gander et al Dahadinni N-43-A

FIELD

LOCATION: Unit N Area: Section 43 Grid 64-00-124-30

Latitude 63-52-09.3 Longitude 124-39-15.1

U.W.L.R. 63.87314 ---- 124.65420

U.W.I. 1024364001243N0

Rig Release Date: 04-05-71

Status: D+A

Information Release Date: 04-05-73

CHANGE OF NAME:

DATE RECEIVED	INDEX
18-1-71	Application for a Drilling Authority.
	Well Completion Data.
	Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
25-8-71	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.
	Data for Back Pressure Test on Natural Gas Wells – Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells – Vitter's Method.
	M.P.R. – Oil – Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale Small scale

(AND 5290 (3.69)

DEPARTMENT OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
MINISTÈRE DES AFFAIRES INDIENNES ET DU NORD CANADIEN

OIL & MINERAL DIVISION
DIVISION DU PÉTROLE ET DES MINÉRAUX

WELL COMPLETION DATA
RENSEIGNEMENTS SUR LES FORAGES

Drilling Authority No. / N° de l'autorisation de forage

Date Issued / Date de délivrance

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.
À présenter en double dans les trente jours suivant l'achèvement, le remaniement, l'abandon et le reconditionnement de chaque puits, ou après suspension.

Well Name & No. – Nom et N° du puits	Permit No. – N° de permis	Lease No. – N° de concession
Candex et al Dahadinni M-43A	3251	

(Permittee, Licensee, Lessee) – (Détenteur de permis ou de licence, du concessionnaire)	Exploration Licence No. – N° de licence de sondage
Shell Canada Ltd. & Shell Explorer Ltd.	
(Operator) – (Exploitant) Candex Development Limited	Exploration Licence No. – N° de licence de sondage 1791

LOCATION – EMPLACEMENT

Unit – unité	Section	Grid – Grande quadrille	Latitude	Longitude
M	43	64°00' 124°30'	63°52'59.3"	124°39'15.1"

Unique Well Identifier – Code d'enregistrement	Universal Well Location Reference – Référence universelle d'emplacement du puits
300M436400124300	

	Date	Depth – Profondeur
Spudded / Début des travaux	Feb.2/71	
Suspended / Suspension des travaux		
Resumed Operations / Reprise des travaux		
Finished Drilling / Forage terminé		
Deepened / Approfondissement		
Completed (Gas/Oil) / Achèvement (Gaz/Pétrole)		
Abandoned / Abandon	Aug.25/71	10,272
Rig Released / Fin des travaux	Sept. 4/71	10,272

Pool(s) / Gisement(s)

Interval(s) Open to Production / Intervalle(s) de production

Elevation Gr. / Altitude du sol 813 — K.B. / du carré d'amortissement 822

Rig No. / N° de la tour de sondage 11 — Drilling Contractor / Entrepreneur en forage Heath & Sherwood

Contractor's Business Licence No. / N° du permis de l'entrepreneur

CASING RECORD – FORAGE

Casing Size (inches) / Diamètre (en pouces)	Grade / Qualité	Weight / Poids	Amount / Longueur	Set at – Fixation à	Sacks of Cement and Additives / Sacs de ciment et d'additifs
1. 5"		13#	3704	3700	260 + 4% gel
2. 7"		20#	412	402	261 + 2% $CaCl_2$
3. 9 5/8"		32#	98	95.8	59 sax Permafrost cement
4.					
5.					
6.					

Geological Tops / Sommet des formations	Elevation – Profondeur: Measured / Mesurée	Elevation – Profondeur: Sub-Sea / Sous-mer
Canol	2712	(-1890)
Hare Indian	3072	(-2250)
Hume	3546	(-2724)
Headless	4070	(-3248)
Landry (?)	4273	(-3451)
Bear Rock	4990	(-4168)
T.D.	10272	

Core Record – Carottes

From – De	To – À	Recovery	From – De	To – À	Recovery
3708' to	10272				
Continuous coring					

Log Record – Diagraphies

Run No.	Type of Log / Genre de diagraphie	From – De	To – À
1	Borehole Compensated Sonic	400	3701
2	" " "	3710	10275
1	Dual Induction Laterolog	400	3698
1	Induction Electrical	3708	10024
1	Gamma Ray-Neutron	3707	10024
1	Caliper	3705	10275
1	Formation Density	400	3702

CEMENTING RECORD (Plug, Squeeze, etc.) / CIMENTATION (Bouchon, base pression, etc.)				PERFORATING RECORD (Guns, Jets) / PERFORATION (Canons, Jets)				SERVICING RECORD (Acidizing, Fracing, etc.) / ENTRETIEN (Acidification, Fracturation, etc.)			
Date	From - de	To - à	Remarks - Remarques	Date	From - de	To - à	Remarks - Remarques	Date	From - de	To - à	Remarks - Remarques
Plug #1 - Aug.24/71	9266	T.D.	Cement w/100 sax + 400 # CFR2. P.D. 3:40 a.m. Tagged at 2:00 p.m.								
Plug #2 - Aug. 25/71	3645	3760	16 sax Oilwell cement P.D. 12:45 p.m. Tagged at 3620 @ 9:30 p.m.								

Displaced hole to inhibited water 3620 - 540 Diesel from 540 to surface.

DRILL STEM TESTS – ESSAIS AUX TIGES

No. - N°	Date	Formation	From - de	To - à	I.O. Mins. Ouverture initiale (minutes)	I.S.I. Mins. Fermeture initiale (minutes)	F.O.I. Mins. Ouverture définitive (minutes)	I.S.I.B.H.P. Pression de fond à la fermeture initiale	F.S.I.B.H.P. Pression de fond à la fermeture définitive	I.F.B.H.P. Pression de fond en écoulement initiale	F.F.B.H.P. Pression de fond à l'écoulement définitif	I.H.P. Pression hydrostatique de départ	F.H.P. Pression hydrostatique définitive	Remarks - Remarques
1	Feb.26/71	Imperial	1112	1222	5-45	30	60	378	374	372	358	429	388	Rec. 600' drilling mud. 30' water
2	Aug.9/71	Bear Rock	9736	10013	5-15	60	30	-	-	-	-	4152	4135	Rec. 1920' drilling mud Misrun
3	Aug.14/71	" "	9731	10013	5-60	60	120	4136	4125	3765	4125	4070	4104	Rec. 2000' drilling mud, 1870' muddy water, 5,000' salt water

ANALYSIS – ANALYSE

Lab. No. - N° de laboratoire	Sample - Échantillon	From - de	To - à	Source	Remarks - Remarques
933-1115	Mud Filtrate	9736	10013	D.S.T. #2	Rmf=0.75 @ 72°F. Cloride = 3330 mg/l
"	8870' Liquid	9731	10013	D.S.T. #3	R_w= 0.10 @ 73°F Specific gravity= 1.0542 @ 60°F pH - 7.3 H_2S - nil Total solids - calculated 77,075 mg/l

PRESENT STATUS OF WELL / ÉTAT ACTUEL DU PUITS

XXXX

Company / Compagnie: Candex Development Limited

Signature: E. E. Gunting

Title / Titre: Geologist

Date: October 20, 1971

Forms to be completed in duplicate and forwarded to the District Conservation Engineer.

Présenter des formules remplies en 2 d'exemplaires au conservateur du district.

Drilling Authority No. 487

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well or Suspend Drilling

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling:—

Name and number of well: Candex et al Dahadinni M-45A

Location: Unit: M Section: 43 Grid: 64°00' - 124°30'

Latitude: 63°52'59.3" Longitude: 124°39'15.1"

From Established Reference Marker

Universal Well Location Reference

Permit No. 3251 Lease No.

Shell Canada Ltd. & Shell Explorer Ltd.
(Permittee, Licensee, Lessee)

Date of commencement of proposed program: August 23, 1971

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at: Nil
Gas at: Nil
Water at: 9742'
Total Depth: 10,272' Date of last operations: August 22, 1971
Present condition of well: Open hole from 3703' to 10,272', filled with drilling fluid.

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. 9-5/8"	32#	98	95.8	59 sax Permafrost cement	Nil
2. 7"	20#	412	402	261 sax + 2% $CaCl_2$	Nil
3. 3"	13#	3704	3700	360 sax + 4% Gel	Nil
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	10,272 - 9,257'	Bear Rock	100	Placed in 2 stages. Felt after 8 hrs.
2	3,760 - 3,645'	Hume and over Int. casing	12	Feel after 8 hrs.
3	Weld on cap, 3" riser and 3" API valve for Temperature Survey			

The following logs have been run: ISS, GRN, Sonic-Caliper

Other operations proposed: 3" casing will be displaced to inhibited water to 500' and diesel from 500' to surface for temperature observation well.

Operations to be carried out by: Heath & Sherwood Drilling Contractor Licence No. 761

Address: 804 London House, Calgary, Alberta Address

Responsible Agent in field: Slain, Sinnis & Associates, 631 - 7th Avenue S.W., Calgary, Alta.

Dated at: Calgary, this 23rd Day of August 1971

Signed by: [signature] Company: Candex Development Limited

Title: Engineer Operator's Exploratory Licence No. 1791

Note: The District Conservation Engineer's office must be notified before work is commenced.

(For OIL AND MINERAL DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Dated: August 25, 1971 [signature] District Conservation Engineer

IAND 32-00-5 (7-71)

Forms to be submitted in triplicate to District Conservation Engineer, Department of Indian Affairs and Northern Development

Vide as reverse

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT File No. .....

OIL AND MINERAL DIVISION

RIG INSPECTION REPORT

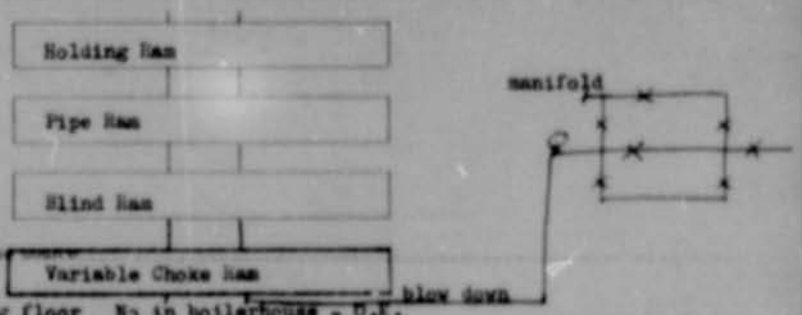
TO BE COMPLETED AS REQUIRED

A. Contractor: Heath & Sherwood Drilling Ltd. Rig: 11-11 Toolpusher: Cliff Hokanson

Well Name: Candex et al Dahadinni M-43A Date and Time of Inspection: May 19/71 - 10:30 a.m.

Operation in Progress: Drilling Depth: 5370' Projected Total Depth: 12,000'

B. Blowout Prevention Equipment



Description and Location of pressure gauge:

Location of BOP controls: On rig floor N_2 in boilerhouse - O.K.

What kind of test was witnessed? Mechanical X Pressure ..... Describe test: O.K.

Satisfactory	Unsatisfactory		
X		1. Is drilling authority posted?	Drilling Authority
X		2. Was drilling authority issued before well spudded?	
X		3. Does BOP equipment appear to be properly connected?	BLOWOUT PREVENTION EQUIPMENT
X		4. Are BOP's tested daily?	
X		5. Was equipment adequately pressure tested before drilling out casing shoe?	
X		6. Did it appear all of crew knew how to operate equipment	
X		7. Is wellhead adequately heated for winter operation?	
X		8. Are blood-off lines tied down?	
X		9. Are distance requirements for following equipment satisfactory? (a) Boiler (150') (b) Open flame or electrical element heaters (75') (c) Flare pit to wellhead (150') (d) Oil or rubbish (75')	FIRE HAZARDS
X		10. Are smoking regulations being observed?	
X		11. Are tour reports satisfactory?	TOUR REPORTS
X		12. Have required number of deviation surveys been run?	MISCELLANEOUS
X		13. Are there any apparent hazardous conditions on the rig?	
X		14. Does equipment conform to special H_2S area requirements?	
X		15. Is well properly located with respect to buildings, roads, etc.?	

D. Remarks and Recommendations

Item No.	(Any action required of Calgary Office must be listed here)
1.	Surface casing at 3700' - 5" casing.
2.	Conductor pipe at 402'.
3.	Automatic shut-downs on 2 of 5 motors inoperative.
4.	Light over mud tank not vapor proof.
5.	General Clean-up of lease necessary.

Instructed toolpush to rectify above faults.

Field Office: Calgary Division Representative: G. E. Blue

M. D. Thomas
G. E. Blue

Drilling Authority No. 487

Project No.

File No.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

JAN 15 1971

Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill:—

Name and number of well: Candex et al Dahadinni M-43A

Location: Unit: M Section: 43 Grid: 64°00' - 124°30'

Latitude: 63°52'59.3" Longitude: 124°39'15.1"

Unique Well Identifier: 30M436400124300

Universal Well Location Reference: Lat. 63.[illegible]314° N., Long. 124.65430° W.

Elevation: Ground 813' K.B. (Est) 821' feet above sea level.

Well is expected to produce from Devonian Carbonates formation at a depth of about 7,000 feet. Expected total final depth 12,000 ft.

Area assigned to well

(For Oil Conservation Engineer's use only)

Permit No. 3251 Lease No. Acreage 28,166

Permittee, licensee, or lessee: Shell Canada Ltd. and Shell Explorer Ltd.

Exploratory Licence No. 108 and 116

Surface owned by Crown or

(If allocated, attach name and address of owner and assignee)

Petroleum and natural gas rights owned by CROWN

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

Casing Size O.D. (inches)	Weight (lb./ft.)	Grade	New or Used	Estimated Depth	Sacks of Cement
1. 9-5/8"	32	H-40	New	90'	75
2. 7"	17	H-40	New	390'	100
3. 5"	11.5	J-55	New	3900'	400
4. 4"	9.5	N-80	New	12000'	100
5.					

Expected water, gas, and oil horizons and type of control equipment: Devonian, Silurian and Ordovician Carbonates, Cambrian Sands to be controlled by BOP's, adequate drilling fluids and good engineering practice.

Well will be drilled with Rotary Rig No. 11 by Heath Sherwood Drilling (Western) Ltd.

(Drilling Contractor or company)

Kirkland Lake, Ontario

Responsible agent of applicant:— Contractor's Business License No. 761

At well: Blain, Binnie & Associates, At registered office: W.D. Cunningham

Address: 631 - 7th Avenue S.W., Address: 500 Crown Trust Building, Calgary

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at Calgary, this 15th day of January 19 71

Signed by [signature] Company: Candex Development Limited

Title: Engineer Operator's License No. 1791

(For Oil and Mineral Division use only)

APPROVED

This application has been examined and approved subject to the following conditions:—

1. Copies of this Drilling Authority shall be exhibited at the drilling rig in both the Doghouse and the Drilling Foreman's office between spud and rig release dates.
2. The Company will submit to this office, on Monday of each week, the lastest reports

Dated 18th January 19 71 Please see over page

(Oil Conservation Engineer)

Forms to be submitted to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

received by radio on the progress of the well.

3. During well drilling and testing operations, every effort shall be made to ensure that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent the contamination of adjacent vegetation and surface or sub-surface waters.

4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.

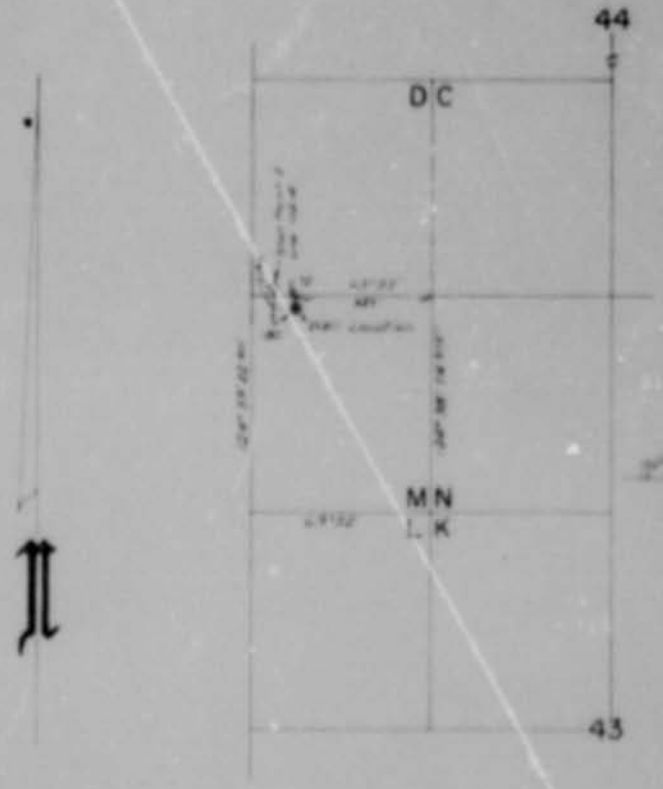
B. H. J. Thorn

B.H.J. Thorn, Oil Conservation Engineer

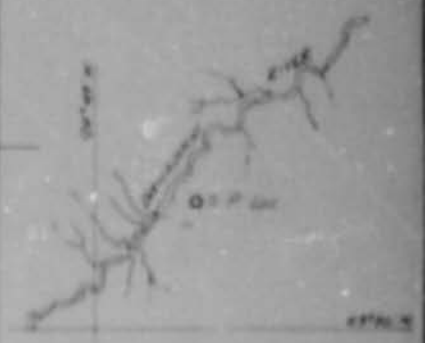
CANDEX ET AL DAHADINNI M43A
M43A 64° 00', 124° 30'

Latitude 63°52'59.3" Longitude 124°39'15.1"

Northwest Territories



DETAIL



LOCATION PLAN

I CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS COMPLETED ON THE 16th DAY OF DECEMBER A.D. 1970

NOTE

CANDEX DEVELOPMENT LTD.

Prepared by

MIDWEST SURVEYS CO. LTD.

C 651 70

CANDEX ET AL DAFADINNI
M-43A

DRILLING HISTORY

TABLE OF CONTENTS

INTRODUCTION

The Wildcat Cambrian test Candex et al Dahadinni M-43A located some 120 miles south of Norman Wells and 175 miles north of Ft. Simpson was to be drilled to a prognosed depth of 12 000'. It was, for geological and mechanical reasons, abandoned at a shallower depth of 10 272'.

To drill the well a slim hole diamond drill rig owned by Heath & Sherwood of Kirkland Lake, Ontario was selected by the Operator. The contract was of the footage incentive type with the Contractor to act as Operator and Expeditor for the well. Blain, Binnie and Associates Engineering Ltd. provided assistance in designing the BOP assembly to conform to normal oilfield drilling practice in wells of this depth. In addition they supplied on-site drilling engineers to observe and report on well progress, as well as insure that normal safety practices were adhered to, as it applied to lost circulation and blow-out prevention. In this latter respect the engineers were not always successful, as the design of the sub-structure on this rig made it impossible to install, test and operate BOPs in a normal fashion.

A program was developed by the Operator and Contractor which it was believed would successfully complete the well. It was planned to drill an 8-3/4" hole with tri-cone rock bits and set 7" surface pipe at 350'. A 6-1/4" hole was to be drilled to 3 900'± and a 5" intermediate string set. Continuous diamond coring procedures were to be employed from intermediate casing to total depth.

SURFACE HOLE

Problems developed shortly after spudding when a large washout occurred in the Permafrost zone. The cement around the conductor barrels washed out and crews were unable to recover a fish lost in the hole after a twist-off at T.D. of 402'.

The rig was skidded 30' east and the well re-spudded. Thirty-three days were lost to this operation, 14 days to drilling and fishing on the first hole and 19 days to moving and rigging for the second hole.

Tight hole conditions caused difficulty in running the 7" surface pipe at 402'. Larger volume mud pumps than were available, would be required to adequately clean an 8-3/4" hole such as this.

Cementing of the 7" surface pipe was attempted using contractor's rig pumps and mud mixing equipment. This proved to be at best a make-shift method as insufficient pump and mixing capacity was available. In addition, the rig pumps became clogged with cement resulting in 2 days lost time clearing pumps, manifolds and tanks. The rig does not have a water or air supply system.

INTERMEDIATE HOLE

Drilling of the 6-1/4" intermediate hole was accomplished in 48 days for the 3 298', or 68.7' per day average. Rig repair time in the first 3 703' of hole amounted to 8.27 days or 12% of the time over the hole. Fishing jobs consumed 4.94 days or 7.16% of the time.

Deviation became severe at a very shallow depth (72[illegible]' - 4°), and was a constant problem throughout the drilling of the well. Drilling weights and rotary RPMs had to be curtailed. Partial but steady lost circulation persisted through the interval from 1 500' to 2 700'. The situation then reversed itself and a daily increase in mud volume continued to 3 700' (intermediate casing depth). It was considered possible that this increase in mud volume, coupled with an increase in the water phase of the mud system was not all from formation, but from water condensation in the mud system, caused by steam hoses being used in the tanks to keep the mud system thawed out.

During this interval of drilling, the Federal Conservation Board Officer required that a number of improvements and alterations be made to the rig to conform more closely to standard oilfield practices before he would allow drilling to proceed. Most of these alterations were completed during a fishing operation at 1 600' and drilling proceeded more or less steadily to intermediate casing point.

Inverted oil emulsion mud was used throughout this section of the hole to protect water sensitive shales from heaving. The oil emulsion mud was effective in minimizing sloughing, but the surface facilities could not cope with the storage and mixing requirements. More than two days (2.57) or 3.58% of the elapsed time was lost because the crews were not able to mix and drill at the same time. A large volume of mud was wasted because the low pump horsepower would not allow

adequate mixing of the emulsifier through the jets. Frequent surface losses through mud system leakage caused delays and added considerably to mud costs for this section of the hole.

Five inch casing was set and cemented at 3 700'. Trouble was experienced with the Halliburton pump truck while displacing cement, rig pumps had insufficient horsepower to take over, as a result the plug was found 70' high on drill out.

DIAMOND CORE SECTION

The 4-1/2" main hole was drilled using a continuous coring method, utilizing a 20' wireline retrievable inner barrel. A total of 128 days were required to core drill the 6 569' from the intermediate casing to total depth of 10 272'. Average progress was 51.3' per day.

Core tube failures resulted in considerable lost time in the interval from 4 100' to 4 500'. It appeared that the causes of these failures were harmonic vibrations in the rod string. Changing the RPMs to non-critical harmonic levels effected some improvement. Half length, or ten foot inner barrels, were run for a time which also reduced the frequency of failures. Although the frequency of core barrel failures were reduced, drill rod failures and twist-offs continued. In an attempt to correct the problem, vertical, solid blade stabilizers, fabricated at Barber Machine in Edmonton, were installed. At one time, as many as 18 stabilizers were run in the hole at 60 and 120' intervals. This of course had the effect of increasing the torque to undesirable levels. Later several failures occurred in the stabilizers themselves. Subsequently most were layed down. In as much as the failures occurred at the same relative position in the string regardless of hole depth it still appeared that harmonic vibration induced at the surface by critical RPMs was a major contributor to the trouble. No stabilization was available at the floor to dampen the effect induced by the hydraulic swivel.

The viscosity of the mud system was increased from(38 - 39)seconds to(50 - 60)seconds at approximately 5 700', and appeared to have an immediate dampening effect on the vibrations in the drill rods. From this point on there were few drill rod failures. Difficulties were experienced in maintaining these higher viscosities but they were overcome through the addition of Kelzan X-C Polymer to the mud system.

DEVIATION

The hole angle remained fairly steady from 3 700' to 4 300', then began to build quite rapidly to a maximum of 27-1/2° at 7 767'. Reduced coring weights and rotary RPMs were used, in addition to stabilizers, in an attempt to keep hole deviation from increasing too rapidly. A 15 foot spiral drill collar, especially designed for this type of drill string, and installed directly above the core barrel was run in the hole at 7 767'. From this depth on the deviation stabilized, and below 8 200' began to return to vertical at a fairly rapid rate so that by 9 900' it had returned to 10-1/2°.

CONCLUSION

It is believed that, while slim hole drilling may have some merit as an exploration tool for carefully selected shallow hole projects, it has not yet been proven in North America to be economically successful on any sustained basis. Hole conditions remained very stable for a small hole with close tolerances, as evidenced by the fact that many times tools were stopped on bottom with neither rotation nor circulation and could still be moved freely on demand.

An Operator must weigh the value of geological information recovered against the additional costs incurred by employing the continuous coring technique. Core recovery time, handling coring equipment and fishing for inside core tube consumed 25.5 days or 18.76% of the rig time below the intermediate casing point. Total waiting on tools, orders, equipment and services consumed 7.61 days or 3.71% of the total time.

The major deficiencies in this operation were:

1. Insufficient motor horsepower and pump capacity. Lack of motor compounds and simple large diameter pipe manifolding. The mud tankage system was inadequate in size and offered no flexibility in emergency situations.

2. Lack of oilfield experience on the part of any of the crew or foremen. (Crews were untrained in rudimentary safety standards and could not recognize safety hazards.)

3. Rig design did not conform to safety regulations as set out by the Federal Government for oilfield drilling operations.

4. Improperly designed substructure, which was unable to accept high pressure BOPs and controls.

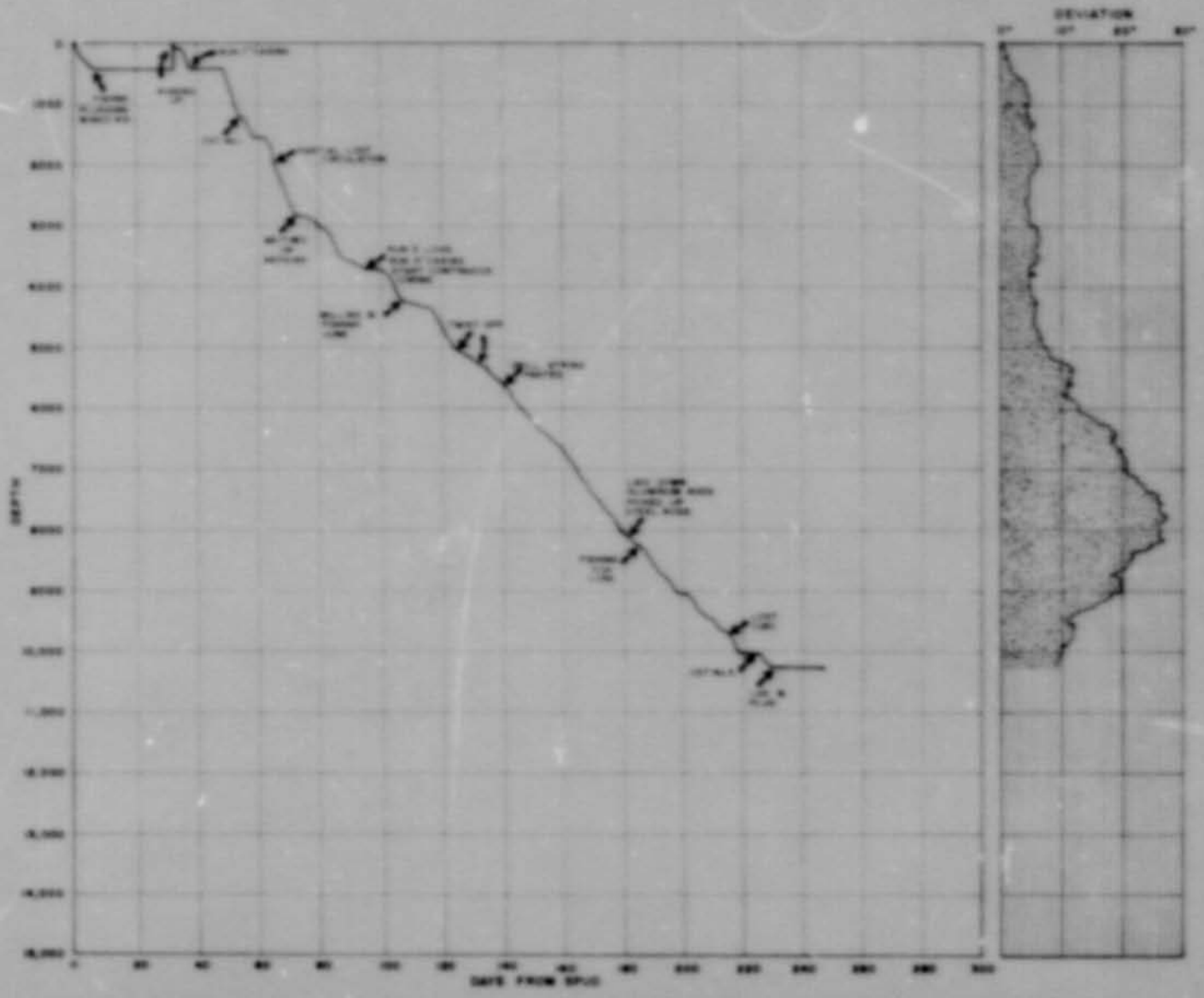
5. Hydraulic drilling system inadequate at depths below 7 000'. It has been demonstrated by others using hydraulic drilling techniques that under continuous heavy use hydraulic equipment must be designed to 2-1/2 times maximum working pressure.

6. Long and tortuous communication and supply lines.

DRILLING RECORD

CANDEX ET AL DAHADNNI

M-456



CANDEX ET AL DAHADINNI M-43A

Time Distribution

Operation	Phase I		Phase II		Total Well	
	Days	% Time	Days	% Time	Days	% Total Time
Drilling (rotating)	26.21	37.85	50.55	37.13	76.76	37.[illegible]
Recover Core (Incl. servicing barrel & fishing inside drill rods)	-	-	25.50	18.73	25.50	12.44
Tripping (for bits)	7.76	11.21	13.07	9.60	20.83	10.16
Rig Repair (Incl. spare parts)	8.27	11.94	12.04	8.84	20.31	9.91
Fishing (Incl. W.O. fishing tools & trips)	4.94	7.13	5.97	4.38	10.91	5.32
Deviation Surveys	1.40	2.02	6.21	4.56	7.60	3.[illegible]
Run Casing (Incl. cmtg. & I.O.C.)	7.26	10.48	-	-	7.26	3.54
Log & DST (Incl. W.O. tools & service men)	1.01	1.46	6.17	4.53	6.78	3.31
Condition Hole	.95	1.37	5.57	4.09	6.52	3.18
Install, Test & Remove BOPs	4.06	5.88	1.01	.74	5.07	2.47
Abandon	-	-	3.56	2.61	3.56	1.74
W.O. Tools (Misc.)	1.56	2.25	1.71	1.26	3.27	1.60
Service Rig & BOP	1.14	1.65	2.01	1.48	3.15	1.54
Misc. (Handling tools, BOP drill, transport fuel, inspect pipe)	2.05	2.96	.74	.54	2.79	1.36
Mix Mud	2.47	3.57	-	-	2.47	1.20
W.O.O.	.15	.22	2.03	1.49	2.18	1.06
Slip, Cut Drill Line	.02	.03	.02	.01	.04	.02
TOTAL	69.00	100.00	136.00	100.00	205.00	100.00

Note: Phase I - All operations from day 4 at 140' through cementing of intermediate casing at 3 700' and drill out.

Phase II - All operations commencing with 1st diamond core run through abandonment.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILLING HISTORY

Candex et al Dahadinni M-43A

DATE	DEPTH 8:00 AM	HOURS DRILLED	MUD				SURVEYS		REMARKS
			WT	VISC	WL	pH	DEPTH	DEV.	
Jan 1/71	0	-	-	-	-	-	-	-	
Jan 2/71	119	5	10.4	45	-	-	100	Misrun	
Jan 3/71	276	16½	11.5	55	-	-	228	1°	
Jan 4/71	286	17	11.3	55	-	-			Pulled bit #1
Jan 5/71	342	7¼	11.2	67	-	-	294	1°	
Jan 6/71	370	14¼	11.4	75	-	-			
Jan 7/71	402	20-3/4	11.4	50					Pipe failure
Jan 8/71	402	0							Fishing
Jan 9/71	402	0							Fishing
Jan 10/71	402	0							Fishing
Jan 11/71	402	0							Fishing
Jan 12/71	402	0							Fishing
Jan 13/71	402	0							Prepare to abdn.
Jan 14/71		0							Skid rig
Jan 15/71		0							30' east
Jan 16/71		0							
Jan 17/71		0							
Jan 18/71		0							
Jan 19/71		0							
Jan 20/71		0							Blasting for new
Jan 21/71		0							location
Jan 22/71		0							
Jan 23/71		0							
Jan 24/71		0							
Jan 25/71		0							Rigging up
Jan 26/71		0							Rigging up
Jan 27/71		0							Rigging up
Jan 28/71		0							Rigging up
Jan 29/71		0							Rigging up
Jan 30/71		0							Rigging up
Jan 31/71		0							Rigging up

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

DRILLING HISTORY

Candex et al Dahadinni N-43A

DATE	DEPTH 8:00 AM	FEET/ HOURS	INVERMUD WT	INVERMUD VISC	MUD FILT.	YIELD	SURVEYS DEPTH	SURVEYS DEV.	REMARKS
Feb 1/71									Rig up
Feb 2/71									
Feb 3/71	72	72/6							Spud 10:30 a.m.
									Feb. 2/71
Feb 4/71	100	28/2							
Feb 5/71	100								c 9-5/8" @ 95'
Feb 6/71	140	40/4	9.7	55					
Feb 7/71	327	187/15	10.7	100					Top sand shale @ 312
Feb 8/71	405	78/19	10.2	57					
Feb 9/71	405	0/0	11.0	90					
Feb 10/71	405		13.0	90					Attempt run 7"
Feb 11/71	405		13.0	90					Tight below 270'
Feb 12/71	405		11.4	65					
Feb 13/71	405								
Feb 14/71	405								c 7" @ 402
Feb 15/71	405								Clean cement from pu
Feb 16/71	405								Cement outside 9-5/8"
Feb 17/71	405								Repair & rig up
Feb 18/71	405								Repair & w/o BOP
Feb 19/71	405				OIL FILT.	YIELD			R.U. & mix mud
Feb 20/71	405								Test BOP
Feb 21/71	552	147/9	7.4	34	3.0	2	474	1-3/4	Replace pump
Feb 22/71	728	176/13	7.5	35	3.5	3	670	4	Reduce drlg. wt.
							700	3-7/8	
Feb 23/71	870	142/14	7.5	36	3.3	2	800	4	small lost circ.
Feb 24/71	1 008	138/20	7.4	34	3.2	2	900	4-1/2	
Feb 25/71	1 137	129/14	7.4	36	3.8	2	1 000	4	
Feb 26/71	1 222	85/6	7.7	34	3.6	3	1 100	4	Circ. to DST
Feb 27/71	1 222	0/0	7.4	36	3.4	2	1 222	5/ 4-1/2	DST #1
Feb 28/71	1 388	166/14	7.6	39	3.7	3	1 300	5-1/8	Trip with plugged
									bit

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILLING HISTORY

Candex et al Dahadinni M-43A

DATE	DEPTH 8:00 AM	FEET/ HOURS	INVERMUD WT	VISC	MUD FILT.	YIELD	SURVEYS DEPTH	DEV.	REMARKS
Mar 1/71	1 440	72/8	7.7	40	3.4	2	1 400	4-3/4	Trip w/plugged bit
Mar 2/71	1 589	149/	7.6	40	3.4	2	1 500	4-1/2	dropped drill string
Mar 3/71	1 589	0/0							in hole - fishing
Mar 4/71	1 589		8.0	38		2			left 2 cones in hole
Mar 5/71	1 589		8.0	38	3.6	2			Fish & repair
Mar 6/71	1 589		8.0	38					rig - re Cons.
Mar 7/71	1 676	87/	7.8	38	2.2	3	1 600	4-1/2	Board orders
Mar 8/71	1 796	120/	7.9	38	2.0	5	1 700	5-1/2	partial lost circ.
Mar 9/71	2 009	213/	8.6	40	3.6	4	1 920	6	partial lost circ.
Mar 10/71	2 101	92/15	8.2	36	3.2	3	2 060	5	partial lost circ.
Mar 11/71	2 298	197/21	8.1	36	4.4	1	2 200	4-1/4	partial lost circ.
Mar 12/71	2 399	101/17	8.2	38	8.6	1	2 300	4-1/8	partial lost circ.
Mar 13/71	2 508	109/14	8.1	36	10.0	3	2 400	4-1/2	partial lost circ.
Mar 14/71	2 666	158/22					2 600	4	dumped tanks
Mar 15/71	2 774	108/18	8.7	40	4.4	4	2 700	4	
Mar 16/71	2 803	29/10	8.7	40	4.4	4			Repair swivel heater
									on BOPs
Mar 17/71	2 857	54/21	8.8	41			2 800	4-1/2	Install rotary w/o
									repairs
Mar 18/71	2 857	0/0							w/o repairs
Mar 19/71	2 857								w/o repairs
Mar 20/71	2 857		8.8	58	2.2	9			Repair rig
Mar 21/71	2 883	26/15	9.4	55	4.8	8			
Mar 22/71	2 930	47/15	8.5	60	2.2	8	2 900	4	
Mar 23/71	2 995	65/22	8.5	50	3.0	3	2960	4-3/4	making mud
Mar 24/71	3 033	38/22	8.5	60	water I		3 000	5-1/4	volume (m. form.
Mar 25/71	3 037	4/8	9.5	93	increasing				
Mar 26	3 075	38/14	9.6	60			3 050	6	
Mar 27/71	3 085	10/3	9.6	63					tubescope drill rods
Mar 28/71	3 122	37/5	9.6	56	3.0	9	3 100	5-7/8	Mud tank leak
Mar 29/71	3 293	171/18	9.6	58	2.4	9	3 200	6	
Mar 30/71	3 354	61/7	9.7	60	2.2	11	3 300	5-3/4	Chge. worn drg. line
Mar 31/71	3 425	121/17	9.8	54	2.7	12	3 400	5-1/8	

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

DRILLING HISTORY

Candex et al Dahadinni H-43A

DATE	DEPTH 8:00 AM	FEET/ HOURS	INVERMUL MUD WT	VISC	FILT.	YIELD	SURVEYS DEPTH	DEV	REMARKS
Apr 1/71	3 522	47/14	9.6	52	3.2	10	3 500	6-1/4	
Apr 2/71	3 556	34/14	9.6	53	3.8	12			Attempt button bit
Apr 3/71	3 568	12/9	9.7	50	3.8	12	3 550	6	Run dia bit hole
									too tight
Apr 4/71	3 579	11/8	9.4	45	3.6	13			
Apr 5/71	3 600	21/12	9.3	44	4.1	10			
Apr 6/71	3 629	29/15	9.3	43	3.6	9	3 600	5-3/4	
Apr 7/71	36/6	17/13	9.5	47	4.8	9	3 630	5	
Apr 8/71	3 678	32/22	9.4	45	4.4	9			
Apr 9/71	3 706	28/20	9.3	44	4.8	9	3 706	4-1/2	
Apr 10/71	3 703	Depth correction							Run E. logs
Apr 11/71	3 703								Running casing
Apr 12/71	3 703								c 5" casing @ 3 700'
Apr 13/71	3 703								Rig up BOPs
Apr 14/71	3 703				Press. test BOPs				Drill out cmt.
		START CONTINUOUS CORING							
		4-1/4" hole see next page.							

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

Cindex et al Dahadinni
P-43A (D.L. Tufts)

DRILLING HISTORY

Coring Started @ 3708' Ks

DATE 1971	DEPTH 8:00 AM	FEET/ HOURS	DRLG. Wt/M	DRLG. RPM			SURVEYS DEPTH	SURVEYS DEV.	REMARKS
April 15	3743	35/4	5000						Coring with water
April 16	3786	43/5	3-4	225/250			3759	5-3/4	base mud
April 17	3883	97/13	2500 3000	250			3799	4½	
April 18	3946	93/11	2500	250/300			3850 3950	4-3/4 4½	
April 19	4100	134/15	3000	300			4000	4-1/8	
April 20	4178	73/11	2500 3000	250/150			4050 4100	4-3/4 4-3/4	Core tube broken
April 21	4206	33/5	2500	130			4150	5-1/8	High rotary torque
April 22	4245	39/7	1500	100			4200	5½	Core tube broke
April 23	4275	30/6	1500	100					several times
April 24	4278	3/3	1500	100					run 10' tube in
April 25	4280	5/2	1500	100					place of 20',
April [illegible]	4291	11/2	1500	100					Milling & fishing junk
April 27	4310	19/7	1500	120			4258	6	
April 28	4317	7/2	1500	100/150					Drill string parted
April 29	4343	26/9	1500	100			4300	5½	Ran 2 stabilizers
April 30	4416	73/17	2000	110/200			4366	5½	
May 1	4456	40/7	2000	200			4425	5½	
May 2	4515	59/12	3500	200					8 stabilizers
May 3	4615	100/16	3000	150			4500	5¼	
May 4	4680	65/11	3000	150			4550 4600	5½ 5½	
May 5	4803	123/18	3000	150					
May 6	4889	86/14	2000	150			4750	6	Twist-off
May 7	4952	63/19	2000	150					
May 8	5015	63/15	1800	150			4950	6-3/4	
May 9	5042	27/9	1800	150			5000	7	Twist-off
May 10	5063	21/4	1800	150					Twist-off
May 11	5063	-							Fishing
May 12	5104	41/9	1800	130			5050	7-3/4	
May 13	5178	74/16	1500	130			5100	7-3/4	
May 14	5205	27/4	1500	130			5150	8	
May 15	5252	47/9	1500 1500	130 150			5200	9-3/4	Using 10 stabilizers
May 16	5279	27/5	1200	150			5250	10-3/4	Twist-off
May 17	5299	20/5	1200 1200	130					Twist-off
May 18	5347	48/13	1500	140			5297 5343	11½ 12	
May 19	5370	23/18	1500	140			5370	11½	Pull on rotary

E-9

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

Candex et al Dahadinni
M-43-A
1971

DRILLING HISTORY

D. L. Tufts

DATE	DEPTH 8:00 AM	FEET/ HOURS	Drilling WT	Drilling RPM	Drilling WL	Drilling pH	SURVEYS DEPTH	SURVEYS DEV.	REMARKS
May 20	5394	24/7	1500	140			5376	11½	
							5390	11½	Fractures in cores
May 21	5446	53/12	1500	140					(jamming) lost circ.
May 22	5465	19/5	1500	140			5404	11-3/4	@ ± 450'
							5425	11½	
May 23	5517	52/13	1500	140					
May 24	5582	65/14	2000	140			5523	10-3/4	Drill string parted
							5555	10½	
May 25	5591	9/3	2000	140					
May 26	5637	46/10	2000	200			5599	12 (?)	
			2500				5600	10½	
May 27	5721	84/11	2500	200			5650	11	
May 28	5807	86/15	2500	200			5706	11	
							5765	10	
May 29	5858	51/11	2000	200			5827	12	Varying bit wt. in
			2500	240			5835	12	attempt to keep hole
May 30	5957	99/15	2000	200+					straight
May 31	5985	28/15	2000	200+			5950	13	
June 1	6071	86/18	1500	200+			6018	12½	
June 2	6103	32/9	1500	200			6070	13½	Core barrel jamming
June 3	6157	54/17	1200	200+			6090	14	
			1500						
June 4	6234	77/16	1200	200+			6135	15	
			1500				6170	15½	
June 5	6294	60/18	1000	200			6215	16	
June 6	6318	24/6	1200	230			6235	17	Repair hydraulics
							6278	18	
June 7	6393	75/13	1000	230			6310	18	
							6355	18½	
June 8	6413	20/5	1000	240			6391	19	
June 9	6467	54/14	1000	240			6418	19	
							6440	18	
June 10	6504	37/13	1000	240			6500	19	
June 11	6556	52/12	1200	240			6550	18	
			1500						

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

Candex et al Dahadinni
M-43A
1971

DRILLING HISTORY

D. L. Tufts

DATE	DEPTH 8:00 AM	FEET/ HOURS	Drilling WT	Drilling RPM	Drilling PUMP	Drilling pH	SURVEYS DEPTH	SURVEYS DEV.	REMARKS
June 12	6576	20/3	1000	240				Run	Eastman Dir. Survey
June 13	6633	57/10	1500	240			6609	19	
June 14	6674	41/7	1000	230			6665	20	
June 15	6728	54/10	1000	230			6728	20	Repair Wt. Ind.
			1500						
June 16	6807	79/9	1000	220			6728	20	
			1500				6794	19½	
June 17	6916	106/12	1500	220			6860	20½	
							6925	20½	
June 18	6996	80/9	1500	220			6980	20½	
June 19	7101	105/14	1500	200			7040	20½	Pull wireline apart
June 20	7143	42/8	1500	210			7122	22½	using blocks
June 21	7244	101/17	1000	200			7180	22½	
			1500						
June 22	7337	93/16	1000	200			7265	23½	Drlg. rate incr. @
			1500						7 300'
June 23	7387	50/11	1250	200+			7340	24	
							7380	25½	
June 24	7439	52/14	1000	200+	425				
			1250						
June 25	7490	51/15	1250	200+	425		7438	26	
							7471	25-1/2	
June 26	7559	69/18	1000	200	425		7518	26	Reduce wt. on bit
June 27	7633	74/15	1000	220	425		7555	26-1/2	
							7598	26-1/2	
June 28	7699	66/16	1000	220	425		7639	26	3992'/75 days =
									53'/day
June 29	7763	64/17	1000	220	425		7671	26	
							7731	27	
June 30	7789	26/7	1000	240	450		7767	27-1/2	
July 1	7873	84/16	1000	220	450		7805	27	
			1200				7836	26-1/2	
July 2	7961	88/16	1500	230	400		7886	26	

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

Candex et al Dahadinni
M-43A
1971

DRILLING HISTORY

D. L. Tufts

DATE	DEPTH 6:00 AM	FLET/ HOURS	Drilling WT	Drilling RPM	Drilling PUMP	Drilling PH	SURVEYS DEPTH	SURVEYS DEV.	REMARKS
July 3	8021	60/11	1500	180	400		7938	26	
							7979	26	
							8018	26-1/2	
July 4	8021	0/0							Power swivel broke
									down
July 5	8081	60/11	1500	240	375		8049	26	
July 6	8121	40/7	1500	200	375		8091	26	Laid down 80 Alum.
									rods, picked up 80
									steel rods
July 7	8208	87/15	1500	200	425		8190	27	Misruns @ 8150,8170
			1200						
July 8	8275	67/13	1500	210	400		8230	24-1/2	
							8243	25	
July 9	8275	0/0							Fishing for core
									barrel
July 10	8290	15/3	1500	210	475				Core jamming,vert.
					550				frac.
July 11	8368	78/14	2000	200	500		8293	24	Min. jamming, 45°
							8325	24	bedding
July 12	8449	81/15	2000	210	450		8385	21-1/2	
							8397	22	
							8440	21-1/2	
July 13	8529	80/14	2000	200	450		8480	21-3/4	Badly broken 8522-27
July 14	8579	50/8	2000	210	450		8545	21	
July 15	8662	83/16	2000	210	425		8608	20-1/2	
July 16	8724	62/15	2000	190	425		8668	20	Vibration in hole
				200					Short rods, slow
									penetration
July 17	8762	38/10	2000	190	425		8733	18	As above
			3000	200					
July 18	8787	25/5	2000	200	450		8780	20	Bent core barrel
									possibly accounts for
									18° @ 8711

E-9

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

Cindex et al Dahadinni
M-43A
1971

DRILLING HISTORY

DATE	DEPTH 6:00 AM	FEET/ HOURS	Drilling WT	Drilling RPM	Drilling PUMP	Drilling PH	SURVEYS DEPTH	SURVEYS DEV.	REMARKS
July 19	8865	78/14	2000	200	450		8798	20	
				230			8843	19-1/2	
July 20	8932	87/15	2000	200	450		8903	20	Instrument shot twice
				230	500		8943	19-1/2	
July 21	9041	99/14	2000	230	450		9001	20	Instrument shot twice
July 22	9061	20/4	2060	175	475		9060	18	Engine failure-no
				200					repairs
July 23	9061	0/0							W.O. Repairs
July 24	9097	26/7	2000	200	450				Repaired GMs
July 25	9179	82/15	2000	200	500		9105	18	
							9165	17	
July 26	9267	88/14	2000	200	500		9237	15-1/2	
July 27	9339	72/11	2000	200	450		9297	15	Repair hydraulic
									motors
									104 core days - 5631'
									56'/day average
July 28	9371	32/6	2000	200+	450		9361	12-1/2	Trip for new bit
July 29	9414	43/6	2500	200+	450				Power swivel failed
July 30	9497	83/12	2500	200+	450		9476	11	Totco survey trouble
July 31	9497	0/0							GM engine blew
Aug 1	9505	8/2	2000	150/200	400				Wait on replacement
									Installed new motor
Aug 2	9572	67/11	2000	120	375		9505	11	Wireline unit trouble
							9566	12	
Aug 3	9662	90/13	2000	200	375				Wireline unit trouble
Aug 4	9662						9630	12	Shut down to install
									new 4 cyl. GM engines
Aug 5	9692	30/5	2000	200	375				Install. of engines
									complete
Aug 6	9742	50/5	2000	200	375				Installed new drill
									line
							SEVERE LOST CIRCULATION @ 9742'.		
Aug 7	9775	33/4	2000	150/200	250		Still losing		up to 20BPH
Aug 8	9905	130/14	2000	200	250/320		9800	11-1/2	Fluid losses continued
					- 17 -				all day @ 2-20BPH

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILLING HISTORY

Cyndex et al Dahadinni M-43A

DATE	DEPTH 8:00 AM	FEET/ HOURS	DRILLING				SURVEYS		REMARKS
			WT	RPM	PUMP	pH	DEPTH	DEV.	
Aug 9	10013	108/11	2000	200	350		9900	10-1/2	Fluid losses under
									control
Aug 10	10013	0/0	Conducting DST #2 - Int. 9732 - 10013.						
Aug 11	10013								Lost boiler room by
									fire
Aug 12	10013								Standby
Aug 13	10013								Standby
Aug 14	10013								Logging
Aug 15	10013								DST #3 9731-10013
Aug 16	10013								Lost circ.
Aug 17	10076	63/6	2000	200	360				
Aug 18	10212	136/13	2000	170	360		10117	9-1/2	
Aug 19	10239	27/3	2000	180	450				
Aug 20	10272	49/3	180	350					T.D.
Aug 21	10272	0/0							Logging
Aug 22	10272								Logging
Aug 23	10272								Tear out rig
Aug 24	10272								Dispose excess fluids
Aug 25	9256								plugging
Aug 26	3620								plugging
Aug 27	3620								Rig down
Aug 28	3620								Circ. corrosion
Aug 29	3620								Ihibiter
Aug 30									
Aug 31									
Sept 1	3620								Tear out rig
Sept 2	3620								& fly equipment &
Sept 3	3620								men to MacKenzie
Sept 4	3620								River
				Weld on plate and swedge.					
				P & A					

E-9

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

BIT RECORD

WELL Canlex et al Dahadinni LOCATION M-43A CONTRACTOR H & S RIG No 11-11 FIELD W/C

No	SIZE	MAKE	TYPE	JET SIZE	DEPTH OUT	FEET	HRS	ACCUM HOURS	DULL COND T	B	G	WT ON BIT	RPM	PUMP PRESS	No.1 SPM	LINER	No.2 SPM	LINER	DATE
1A	12¼	Reed	YS41G	Out	100	100	7-3/4	7-3/4	1	1	I	4	60	50	100	3½x6½	500	2½x3	3/2/71
1B	8-3/4	Reed	YT1A	Reg.	206	106	8		2	2	I	6	60	50	100	3½x6½	500	2½x3	
2B	8-3/4	Reed	YS1	Reg.	405	199	25	33	6	3	I	12	75	100	100	3½x6½	500	2½x3	
1C	6¼	Reed	YM	Reg.	682	177	15½	15½	4	4	I	10	75-100	75	100	3½x6½			21/2
2C	6¼	Reed	YM	Reg.	772	90	6-3/4	22¼	3	2	I	6	150	75	100	3½x6½			22/2
3C	6¼	Reed	YM	Reg.	888	116	18¼	40½	7	5	I	6	150-200	75	100	3½x6½			23/2
4C	6¼	Reed	YM	Reg.	1048	160	22¼	66-3/4	7	8	I	6-9	150+	75	DPM		Ann.Vel.		24/2
5C	6¼	Reed	YS1	Reg.	1220	172	15	81-3/4	2	6	I	6-11	140	75/100	100		120		26/2
6C	6¼	Reed	YS1	Reg.	1388	166	13-3/4	95½	2	3	I	-	120	70/80	-		100		1/3
7C	6¼	Reed	YS1	Reg.	1589	201	21-3/4	117¼				6	120	85	85		100		2/3
8C	6¼	Reed	YS1	Reg.	On part of Drill String that was dropped - lost all cones														
9C	6¼	Reed	YS1	Reg.	1796	207	18¼	135½	2	6	I	4/5	120	95	95		88		8/3
10C	6¼	Reed	YT1A	Reg.	2060	264	24½	160	2	6	I	3	120	85	95		88		10/3
11C	6¼	Reed	YT1	Reg.	2348	232	24-3/4	184-3/4	2	6	I	3½	120	85	95		88		12/3
12C	6¼	Reed	YS1	Reg.	2484	139	22¼	207	2	6	I	3½	120	90	95		88		13/3
13C	6¼	Reed	YT1A	Reg.	2672	188	25¼	232¼	2	6	I	3½	120	90	95		88		15/3
14C	6¼	Reed	YS1	Reg.	2800	128	24	256¼	3	6	I	4	120	90	95		88		16/3
15C	6¼	Reed	YT1A	Reg.	2857	57	21-3/4	278	8	8	I	3½/4	120	140	118		108		20/3
16C	6¼	Reed	YT1A	Reg.	2885	28	17-3/4	295-3/4	6	8	I	4/8	120	150	95		88		22/3
17C	6¼	Sec.	S86	18-3	3037	152	64	395-3/4	1	8	I	7	150	250	118		108		24/3
18C	6¼	Sec.	M4X	7-7-9	3085	36	13	372-3/4	2	7	I	3/5	150	550	118		108		27/3
19C	6¼	Sec.	S3	7-7-9	3293	208	21	395-3/4	2	7	I	3/4	150	550	118		108		29/3
20C	6¼	SW	DSC1G	8-8-8	3475	182	23½	419¼	2	7	I	4	125	600	118		108		31/3
21C	6¼	SW	DSC1G	8-8-8	3522	47	14	433¼	2	7	I	4/5	125	500	118		108		1/4
22C	6¼	SW	SSV	8-8-8	3556	34	14	447¼	2	7	I	5	125+	400	118		108		2/4
23C	6¼	SEC	S88	7-9-9	3568	12	8-3/4	456¼	1	1	I	8	60	600	118		108		3/4
24C	6-7/32	Christian	Diamond	7-9-9	Could not get to bottom.														4/4
25C	6¼	SW	SSV	8-8-8	3579	11	7-3/4	464	2	4	I	8	100	375	118		108		4/4
26C	6¼	Reed	YT1A	Reg.	3605	26	16¼	480¼	2	6	I	4-5	125	130	118		108		4/6
27C	6¼	SW	DSC3	8-8-8	3646	37	22½	502-3/4	2	6	I	6-9	60-90	300	118		108		4/7
28C	6¼	SEC	S88	7-9-9	3665	60	41½	543¼	1	7	0-1/8	7	60	375/600	118		108		4/8

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

BIT RECORD

WELL Dahadinni LOCATION M-41A CONTRACTOR H & S RIG No 11-J FIELD Wildcat N.W.T.

Diamond Coring Started at 3708' KB

No ⊙	SIZE	MAKE	Ser.#	Series	DEPTH OUT	FEET	HRS Rotating	ACCUM HOURS			Ft./Hr.	WT. ON BIT	RPM	PUMP PRESS	No.1 SPM LINER	No.2 SPM LINER	DATE
1D	4-1/4	HSI	266		3762	54	6	6			9.0	4000	225	250			
2D	4-1/4	HSI	267		3826	64	7-3/4	13-3/4			8.2	3000	300	300			
3D	4-1/4	HSI	254		3966	140	19	32-3/4			7.4	2500	300	250			
4D	4-1/4	HSI	247		4173	207	26	58-3/4			8.0	2500/ 3000	300	225/ 250			
2D(RR)	4-1/4	HSI	267		4207	34	5-1/4	64			6.5	2500	150	175/ 200			
5D	4-1/4	HSI	265		4273	66	12-1/2	76-1/2			5.3	1500	100	200			
Mill	4-1/4				4274	1	7										
1D(RR)	4-1/4	HSI	266		4278	4	1-1/4	77-3/4			3.3	2000/ 3000	100	250			
Mill	4-1/4				4279	1	2-1/4										
6D	4-1/4	HSI	249		4282	3	3-1/4	81				3000	100	200			
7D	4-1/4	HSI	243		4680	398	81-3/4	162-3/4			9.8	1500	100-120	125/ 225			
8D	4-1/4	HSI	295		4889	209	32	194-3/4			6.6	2000	150	175			
9D	4-1/4	HSI	293		5062	173	39-3/4	234-1/2			4.3	1500/ 1800	250	175			
10D	4-1/4	HSI	294		5192	130	29	263-1/2			4.5	1500	130	175			
11D	4-1/4	HSI	296		5376	184	42-3/4	306-1/4			4.3	1500	130	175			
12D	4-1/4	HSI	244		5582	206	47-3/4	354			4.3	1500	140	150			
13D	4-1/4	HSI	272		5637	55	12	366			4.6	2000/ 2250	150/ 200	250/ 400			
14D	4-1/4	HSI	252		5847	210	34	400			6.2	1500	200+	400/ 450			
15D	4-1/4	HSI	263		6035	188	46-1/4	446-1/4			5.4	1500	200+	430			
16D	4-1/4	HSI	243		6176	201	52	498-1/4			3.9	1000/ 1500	230	430			
17D	4-1/4	HSI	271	5-10	6405	109	21-3/4	510			5.0	1000	240	425			
18D	4-1/4	HSI	270	5-10	6504	99	18	528			5.5	1000	240	425			
19D	4-1/4	HSI	297	5-10	6728	224	40-1/2	578-1/2			5.5	1000/ 1500	230	375			

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

BIT RECORD

WELL Dahadinni LOCATION M-43A CONTRACTOR H & S RIG No U-11 FIELD Wildcat N.W.T.

Diamond Coring Started at 3708' KB

No.	SIZE	MAKE	Ser.#	Serial#	DEPTH OUT	FEET	HRS	ACCUM HOURS			Ft./Hr.	WT. ON BIT	RPM	PUMP PRESS	No.1 SPM LINER	No.2 SPM LINER	DATE
20D	4-1/4	HSI	298	S-20	7128	400	48	626-1/2			8.4	1500	210	375			
21D	4-1/4	HSI	256	S-25	7387	259	50-1/4	676-3/4			5.1	1000/ 1000	200+	425			
22D	4-1/4	HSI	299	S-10	7767	380	96	772-3/4			4.0	1000	220	425			
23D	4-1/4	HSI	300	S-10	8021	254	47-3/4	820-1/2			5.3	1000/ 150	230/ 180	400			
24D	4-1/4	HSI	248	S-25	8081	60	10-1/2	831			5.7	1500	220/ 240	375			
25D	4-1/4	HSI	301	S-10	8275	194	34	865			5.7	1500	200/ 210	375/ 425			
26D	4-1/4	HSI	251	S-25	8529	254	45-1/2	910-1/2			5.6	1500/ 2000	200/ 210	450/ 500			
27D	4-1/4	HSI	245	S-25	8762	233	48-1/2	959			4.8	2000/ 3000	190/ 210	425			
28D	4-1/4	HSI	302	S-10	9351	589	99	1058			6.0	2000	190/ 210	425/ 500			
29D	4-1/4	HSI	287	S-25	9497	146	20-3/4	1078-3/4				2500	200+	400/ 450			
30D	4-1/4	HSI	288	S-25	9662	165	25-1/4	1104				2500	200+	375/ 400			
31D	4-1/4	HSI	239	S-25	10013	351	39	1143				1000/ 2000	150/ 200	50/ 350	Lost circulation		
32D	4-1/4	HSI	273	S-25	10223	210	20	1163				2000	170	350			
33D	4-1/4	HSI	275	S-25	10272	49	5	1168				2000	180	350			

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

Condex et al Dahadinni #1 Hole

BIT RECORD

WELL _____ LOCATION M-43A CONTRACTOR H&S RIG No 11 FIELD NWT

No	SIZE	MAKE	TYPE	JET SIZE	DEPTH OUT	FEET	HRS	ACCUM HOURS	DULL COND. T	B	G	WT ON BIT	RPM	PUMP PRESS	No1 SPM	No1 LINER	No2 SPM	No2 LINER	DATE
1	8-3/4	Reed	YS1	Reg.	286	286	17		4	1	TN	10,000	75	50	100	3½	100	3½	1/3
2	8-3/4	Reed	YS1C	Reg		-16	20-3/4			Bit on fish in hole									1/8

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CASING SUMMARY

WELL Candex et al Dahadinni LOCATION M-43A DATE Feb. 13/71

~~SURFACE~~ CONDUCTOR SIZE Conductor 7" KB ±822 KB to CF 9.00'

NO JOINTS	DESCRIPTION	MEASURED LENGTH	KB DEPTH
			401.65
	HALCO Guide Shoe	1.00	400.65
1	7", 20#/ft. K-S, 8rd, R11	32.29	368.36
	HALCO Baffle Insert	-0-	368.36
11	7", 20#/ft, K-S, 8rd, R11	357.96	10.40
1	Landing Jt. as above	10.74	+ 0.34

TOTAL STRING	401.99
KB TO CASING TOP	0.34
LANDED DEPTH KB	401.65
TD DRILLER	405
TD CASING	405
MAKE UP	

CENTRALIZERS None

SCRATCHERS None

WELD/THREAD LOCK (NO JOINTS) Weld shoe and first collar. Bakerlock 2nd and 3rd collars

CEMENTING CO. N.A.

VOLUME & ADDITIVES 145 sax Oilwell +

CALCULATED DISPLACEMENT 16 Bbl. MEASURED DISPLACEMENT 16 Bbl.

TOP PLUG HALCO BOTTOM PLUG None OTHER N.A.

CIRC. TIME BEFORE CEMENT Long BBLS. WASH 8 (Water)

START MIX 10:00 a.m. FIN. MIX 11:00 a.m. START DISPLACEMENT 11:10 a.m.

PLUG DOWN 12:00 Noon MAX MIX PRESS. N.R. MAX DISP PRESS 180 psi

REMARKS Good mud returns around 9-5/8" conductor. None between 7" and 9-5/8"

See reverse for additional cementing details. Slurry wt. + 15.3 ppg at 85°F.

- 23 ENGINEER D. N. Birkell

E-5

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

RECEMENTING 9-5/8" THRU 2" PIPE

WELL Gundex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
	Conductor 7" February 13, 1971
	KB ±822 CASING SUMMARY (con't.)
	KB to CF 9.00'
	Established circulation between 7" and 9-5/8 returning behind 9-5/8".
	Mixed 90 sacks Normal + 2% $CaCl_2$ to obtain 15.4 ppg., 90°F slurry.
	Put 8 bbl. water ahead. Pump slurry away at 11:30 p.m. Good mud
	returns - no cement returns.
	Mix additional 55 sacks Normal and Oilwell + 2% $CaCl_2$. Start to
	pump slurry (15.6 ppg. at 62°F) 12:30 a.m. February 14, 1971. Pumps
	cemented off after 2 bbl. slurry away. No cement returns.
	Cement 2' below cellar between 7" and 9-5/8". Tag cement ±20' down
	outside of 9-5/8". Mix and displace 26 sacks of Oilwell cement
	+ 2% $CaCl_2$ at 110°F and 15.3 ppg. No cement returns. Mix and pump
	additional 11 sacks of Oilwell and Permafrost + 1% $CaCl_2$ as above.
	Cement at surface 10:00 p.m. February 15, 1971.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CASING SUMMARY

WELL Candex et al Dahadinni LOCATION M-43A DATE April 10/71

SURF/INT/PRODUCTION SIZE 5" KB 822' KB to CF 9'

NO JOINTS	DESCRIPTION	MEASURED LENGTH	KB DEPTH
	Halliburton Guide Shoe	0.82	3699.70
1	5", 13.0#, K-5, 8rd casing	15.81	3698.88
	Halliburton Insert	-	3683.07
178	5", 13.0#, K-5, 8rd casing	3688.42	+ 5.35

TOTAL STRING	3705.05
KB TO CASING TOP	5.35
LANDED DEPTH KB	3699.70
TD DRILLER	3703
TD CASING	3702
MAKE UP	

CENTRALIZERS None

SCRATCHERS None

WELD/THREAD LOCK (NO JOINTS) Weld shoe + mill side of 3 collars
Threadlock Insert

CEMENTING CO. HALCO

VOLUME & ADDITIVES 320 sacks + 400# Prehydrated Gel + 140# CFR-2 + 40 Neat

CALCULATED DISPLACEMENT 72 MEASURED DISPLACEMENT 72.0

TOP PLUG HALCO BOTTOM PLUG None OTHER

CIRC TIME BEFORE CEMENT 2 Hours BBLS WASH 1 Diesel + 10 Wtr.

START MIX 10:35 a.m. FIN MIX 11:15 a.m. START DISPLACEMENT 11:17

PLUG DOWN 12:40 p.m. MAX MIX PRESS MAX DISP PRESS 2400

REMARKS 20% excess over Sonic Caliper - hole slightly oval according to Density Log Caliper. HALCO broke down after 52 bbl. away (750 psi). Rig (a use mud pumps then back to HALCO. No returns after this point. Calculated cement top ±500' KB.

- 25 ENGINEER D. R. Bickell

E-5

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILL STEM TEST REPORT

D.S.T. No. 1

DATE

INTERVAL 1112' - 1222' ZONE 1

MUD WEIGHT 7.9 VISCOSITY 38 HOLE SIZE 6-1/4

TYPE OF TEST Bottom hole PACKER SIZE

JARS Bowen TYPE Hydraulic

AUXILIARY EQUIPMENT Safety Joint TYPE

PACKER SET AT 1112' WT SET ON PACKER

CHOKE SIZE 5-3/4 BH 1/2 IN. FLUID CUSHION N/A

CALCULATED H.P 652 psi CALCULATED CUSHION HYD. PRESS

TIME STARTED IN HOLE AM,PM TIME ON BOTTOM 11:25 ~~AM~~,PM

PREFLOW 5 MINUTES

INITIAL SHUT-IN 30 MINUTES

VALVE OPEN 45 MINUTES

FINAL SHUT-IN 60 MINUTES

RESET AFTER MINUTES

BLOW

GAS decreasing and dying in 35 min. of second flow.

RECOVERY

600' drilling mud 4-1/2" drill pipe

30' water

PRESSURES

IHP	432 psi	FHP	381 psi
IFP	364	FFP	357
ISIP	372	FSIP	350

REMARKS

Chloride content 340 ppm

NOTE SAMPLES FORWARDED FOR ANALYSIS

N/A

SAMPLES FORWARDED TO

- 26 - ENGINEER D. B. Bickell

E-8

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILL STEM TEST REPORT

D.S.T. No. 2 (Misrun)
DATE Aug. 10, 1971

INTERVAL 9 736' - 10 013' ZONE
MUD WEIGHT 8.8 VISCOSITY 46 HOLE SIZE 4½
TYPE OF TEST Bottom Hole PACKER SIZE Siegle - 3½"
JARS Bowen TYPE Hydraulic
AUXILIARY EQUIPMENT P.O. Sub TYPE Safety Joint
PACKER SET AT 9 736 WT SET ON PACKER 30M
CHOKE SIZE 0.44 IN. FLUID CUSHION None
CALCULATED HP 4576 CALCULATED CUSHION HYD PRESS
TIME STARTED IN HOLE 9:00 ~~AM~~ PM Aug. 11/71 TIME ON BOTTOM 6:15 ~~AM~~ PM Aug. 10/71
PREFLOW 5 MINUTES
INITIAL SHUT-IN 60 MINUTES
VALVE OPEN 15 MINUTES
FINAL SHUT-IN 30 MINUTES
RESET AFTER MINUTES

BLOW Preflow - No air blow.
Initial flow - No air blow. Mud was dropping in the annulus. Drill Pipe was washed out and partially lost circulation.

RECOVERY Mud in pipe flowed out of pipe through washout at 1 920' above tool.

PRESSURES			
	IHP	4 147	@ 9 720
	IFP	4 079	
	FFP	4 079	
	ICIP	4 079	
	FCIP	4 079	
	FHP	4 134	

REMARKS
Annulus level dropped as tool set on bottom. Lost est. 100 bbl. fluid. Packer hung upon way in hole. Pick up wt. indicated tool opened at this point. Pit level after test indicated approximately 30 bbl. lost to formation

NOTE SAMPLES FORWARDED FOR ANALYSIS

SAMPLES FORWARDED TO
To Candex by Lorne J. Kasmar

- 27 - ENGINEER D. L. Tufts

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

DRILL STEM TEST REPORT

D.S.T. No. 3

DATE Aug. 15, 1971

INTERVAL 9 731' - 10 013' ZONE

MUD WEIGHT 8.7 VISCOSITY 46 HOLE SIZE 4½

TYPE OF TEST Bottom hole PACKER SIZE Single 3½

JARS Bowen TYPE Hydraulic

AUXILIARY EQUIPMENT P.O. Sub ~~TYPE~~ Safety Joint

PACKER SET AT 9 731 WT SET ON PACKER 10 M

CHOKE SIZE 0.44 IN. FLUID CUSHION NIL

CALCULATED H.P. 4 394 CALCULATED CUSHION HYD. PRESS.

TIME STARTED IN HOLE 9:00 ~~AM~~ PM TIME ON BOTTOM 4:00 ~~AM~~ PM. Aug. 15/71

PREFLOW 5 Aug 14/71 MINUTES

INITIAL SHUT-IN 60 MINUTES

VALVE OPEN 60 MINUTES

FINAL SHUT-IN 120 MINUTES

RESET AFTER MINUTES

BLOW Preflow - Fair air blow.

Flow - Good decreasing at end of test.

RECOVERY 2 000' Drl. mud

1 870' Muddy salt water

5 000' Salt water (wt. 8.8#) 38 000 ppm

PRESSURES 9 715

IHP 4 085

IFP 3 872

FFP 4 065

ISIP 4 092

FSIP 4 098

FHP 4 106

REMARKS

Lost approximately 5 bbl. mud in annulus during test.

NOTE SAMPLES FORWARDED FOR ANALYSIS

SAMPLES FORWARDED TO

To Candex by Lorne J. Kasmar

- 28 - ENGINEER L. J. Kasmar

E-8

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

PLUG BACK & ABANDONMENT REPORT

(First Attempt)

WELL Candex et al Dubadinni LOCATION M-43A

KB ELEV.

F.T.D. 402

FLUID IN HOLE 60 vis mud

PLUG BACK STRING

SERVICE COMPANY Contractor H & S

CONS. BD. OFFICER

HOLE SIZE	8-3/4		
DEPTH	402		

CASING IN HOLE	SIZE	SET AT	TOP OF CEMENT
SURF. CSG	20" Conductor		S
PROD. STR			

		PLUG # 1	PLUG # 2	PLUG # 3	PLUG # 4	PLUG # 5
DATE		Jan. 17, 1971				
INTERVAL	TOP	Surface				
	BOTTOM	45'				
FELT PLUG DEPTH		Surface				
FORMATION	NAME	Shale				
	DEPTH					
CALI. HOLE SIZE (AVG.)		30"				
TYPE OF CEMENT		Portland				
NO. OF SACKS		121				
ADDITIVES		Spruce logs				
BBLS. OF WATER AHEAD						
DISPLACEMENT	BBLS WATER					
	BBLS MUD					
SLURRY WEIGHT		14#				
MIXING TIMES	START					
	FINISH					
DISPLACING TIMES	START					
	FINISH					
FELT PLUG TIME		24 hours after rigging down to move rig.				

SURFACE CASING CUT 3' FT BELOW GRD. SURFACE PLUG 7 SACKS

PLATE WELDED Cemented over barrels used as conductor pipe.

CASING SALVAGE SHOT OFF AT _____ FT BELOW GRD.

NO. JOINTS RECOVERED _____

REMARKS Hole was bailed dry to 45'+. logs and dry cement put in first 2' of hole. Logs one foot to two feet long used to fill hole to 3' below surface along with 121 Sk. Portland cement at average 14# slurry.

ENGINEER E. R. Larsen

E-14

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

PLUG BACK & ABANDONMENT REPORT

WELL: Candex et al Dahadinni

LOCATION: M -43A

KB ELEV: 822'

F.T.D.: 10 273'

FLUID IN HOLE: Mud

PLUG BACK STRING: 3-1/2" drill rods

SERVICE COMPANY: H & S

CONS. BD. OFFICER:

HOLE SIZE	8-3/4	6-1/4	4-1/4
DEPTH	405	3 703	10 272

CASING IN HOLE	SIZE	SET AT	TOP OF CEMENT
SURF. CSG	7"	405	-
Int. STR	5"	3 702	±500'

		PLUG # 1	PLUG # 2	PLUG # 3	PLUG # 4	PLUG # 5
DATE		Aug. 24/71	Aug. 26/71			
INTERVAL	TOP	9 256	3 695			
	BOTTOM	10 272	3 760			
FELT PLUG DEPTH		9 660	3 620			
FORMATION	NAME		Btm. 5" casing			
	DEPTH		@ 3 702'			
CALI. HOLE SIZE (AVG.)						
TYPE OF CEMENT		Oilwell	Oilwell			
NO. OF SACKS		100 sax	16 sax			
ADDITIVES		400# CFR-2				
BBLS. OF WATER AHEAD						
DISPLACEMENT	BBLS WATER	55	22			
	BBLS MUD					
SLURRY WEIGHT		15.4	15.2			
MIXING TIMES	START	2:41 a.m.	11:52 a.m.			
	FINISH	3:05 a.m.	12:20 p.m.			
DISPLACING TIMES	START	3:05 a.m.	12:20 p.m.			
	FINISH	3:18	12:45 p.m.			
FELT PLUG TIME		Aug. 25	9:30 p. m.			

SURFACE CASING CUT _____ FT BELOW GRD. SURFACE PLUG _____ SACKS

PLATE WELDED Welded plate on 7" x 5" annulus and installed 5" x 3-1/2" swedge on 5" casing

CASING SALVAGE: SHOT OFF AT _____ FT BELOW GRD.

NO. JOINTS RECOVERED _____

REMARKS _____

ENGINEER L. Kennet

- 30 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

TALLY SHEET

PAGE 1 OF 1

WELL Candex et al Dahadinni LOCATION M-43A

SIZE 7" WT 20 GRADE K COUPLING S THRD Brd

JOINTS ON LOCATION 15 DATE Feb. 9/71

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	32 29	1		1		1		1	
2	32 89	2		2		2		2	
3	32 84	3	Out	3		3		3	
4	32 68	4		4		4		4	
5	32 64	5		5		5		5	
6	32 22	6		6		6		6	
7	32 89	7		7		7		7	
8	32 76	8		8		8		8	
9	32 57	9		9		9		9	
0	32 42	0		0		0		0	
A	326 20	C		E		G		I	
1	32 83	1		1		1		1	
2	32 97	2		2		2		2	
3	31 09	3		3		3		3	
4	10 74	4	LDG. JT.	4		4		4	
5	10 49	5	Out	5		5		5	
6		6		6		6		6	
7		7		7		7		7	
8		8		8		8		8	
9		9		9		9		9	
0		0		0		0		0	
B	118 12	D		F		H		J	

		SUB TOTAL
A	326 20	
B	118 12	444 32
C		
D		
E		
F		
G		
H		
I		
J		
TOTAL	444 32	

	JOINTS	LENGTH
PAGE TOTAL	15	444.32
BROUGHT FORWARD		
GRAND TOTAL	15	444.32

REMARKS Joints #3 and #15 left out
Joint #3 used for rat hole
Joint #14 landing joint

- 31 - ENGINEER D. H. Bickell

E-15

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

TALLY SHEET

PAGE 3 OF 3

WELL Candex et al Dohadinni LOCATION M-43A

SIZE 5" WT. 13.0 GRADE E COUPLING S THRD 8rd

JOINTS ON LOCATION 187 DATE April 1, 1971

JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH	
1	34	05	1	20	49	1	19	59	1	18	67	1		
2	33	36	2	21	01	2	18	77	2	20	27	2		
3	32	83	3	19	50	3	20	83	3	19	45	3		
4	31	99	4	19	25	4	18	33	4	20	56	4		
5	32	33	5	20	13	5	17	80	5	20	38	5		
6	31	92	6	20	75	6	19	24	6	20	31	6		
7	32	82	7	19	97	7	19	53	7	19	84	7		
8	32	04	8	20	16	8	20	34	8	20	50	8		
9	31	91	9	20	17	9	19	50	9	19	41	9		
0	28	97	0	20	10	0	21	00	0	19	84	0		
A	322	22	C	201	53	E	194	93	G	199	23	I		
1	31	12	1	20	61	1	20	09	1	20	70	1		
2	31	38	2	20	17	2	20	27	2	20	11	2		
3	30	59	3	20	50	3	20	81	3	19	30	3		
4	31	97	4	20	73	4	18	90	4			4		
5	29	29	5	19	59	5	15	91	5			5		
6	30	39	6	19	91	6	19	66	6			6		
7	18	46	7	19	53	7	20	46	7			7		
8	20	58	8	20	03	8	18	86	8			8		
9	19	96	9	20	16	9	19	43	9			9		
0	19	27	0	19	46	0	20	02	0			0		
B	263	01	D	200	59	F	194	41	H	60	11	J		

			SUB TOTAL	
A	322	22		
B	263	01		
C	201	53		
D	200	59		
E	194	93		
F	194	41		
G	199	23		
H	60	11		
I				
J				
TOTAL	1636	03		

	JOINTS	LENGTH
PAGE TOTAL	109	2163.21
BROUGHT FORWARD	73	1636.03
GRAND TOTAL	182	3799.24

REMARKS Bottom Row

Other jts. on location: 2 in Roller

#16 - LDG. Jt. 2 in Pick Up Ramp

#1,4,10 out 1 damaged

Run in order (Additional jt. used in flowline)

- 32 - ENGINEER D. M. Bickell

E-15

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

TALLY SHEET

PAGE 2 OF 3

WELL Candex et al Dahadinni LOCATION M-43A

SIZE 5" WT 13.0 GRADE K COUPLING S THRD Brd

JOINTS ON LOCATION 187 DATE April 1/71

JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH	
1	21	45	1	18	50	1	19	92	1	20	36	1		
2	21	33	2	16	66	2	18	41	2			2		
3	18	69	3	18	87	3	19	21	3			3		
4	19	80	4	19	46	4	20	11	4			4		
5	19	40	5	19	59	5	20	72	5			5		
6	18	50	6	20	92	6	20	22	6			6		
7	17	14	7	20	13	7	18	41	7			7		
8	20	03	8	20	74	8	18	80	8			8		
9	19	82	9	19	39	9	19	48	9			9		
0	20	65	0	19	65	0	19	93	0			0		
A	196	81	C	193	91	E	195	21	G	20	36	I		
1	19	41	1	18	33	1	18	96	1			1		
2	20	58	2	19	06	2	20	78	2			2		
3	20	04	3	19	31	3	20	80	3			3		
4	20	78	4	20	76	4	20	83	4			4		
5	20	52	5	19	97	5	19	40	5			5		
6	18	45	6	18	50	6	19	93	6			6		
7	18	86	7	18	84	7	20	25	7			7		
8	21	74	8	19	96	8	20	46	8			8		
9	20	98	9	18	99	9	20	83	9			9		
0	18	67	0	17	21	0	20	17	0			0		
B	200	03	D	190	88	F	202	41	H			J		

			SUB TOTAL	
A	196	81		
B	200	03		
C	193	91		
D	190	88		
E	195	21		
F	202	41		
G	20	36		
H				
I				
J				
TOTAL	1199	61		

	JOINTS	LENGTH
PAGE TOTAL	61	1199.61
BROUGHT FORWARD	48	963.60
GRAND TOTAL	109	2163.21

REMARKS: Row 2 - Middle Row

Run in order

- 33 -

ENGINEER D. H. Bickell

E-15

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

TALLY SHEET

PAGE 1 OF 3

WELL Candex et al Dahadinni LOCATION M-43A

SIZE 5" WT. 13.0 GRADE K COUPLING S THRD Brd

JOINTS ON LOCATION 187 DATE April 1, 1971

JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH	
1	15	81	1	* 20	61	1	* 19	53	1			1		
2	34	48	2	* 19	49	2	* 20	51	2			2		
3	19	90	3	* 19	59	3	* 19	46	3			3		
4	20	39	4	* 19	10	4	* 19	48	4			4		
5	20	35	5	* 19	03	5	* 19	86	5			5		
6	19	38	6	* 19	69	6	* 20	63	6			6		
7	20	66	7	* 20	26	7	* 20	49	7			7		
8	19	11	8	* 17	25	8	* 19	61	8			8		
9	20	34	9	* 18	32	9			9			9		
0	20	35	0	* 18	85	0			0			0		
A	210	77	C	192	19	E	159	57	G			I		
1	18	68	1	* 18	70	1			1			1		
2	20	83	2	* 16	11	2			2			2		
3	19	53	3	* 19	76	3			3			3		
4	19	63	4	* 18	86	4			4			4		
5	18	58	5	* 20	42	5			5			5		
6	19	04	6	* 19	23	6			6			6		
7	20	46	7	* 18	87	7			7			7		
8	19	34	8	* 21	23	8			8			8		
9	18	71	9	* 19	61	9			9			9		
0	20	97	0	* 18	42	0			0			0		
B	195	77	D	191	21	F			H			J		

			SUB TOTAL	
A	210	77		
B	195	77		
C	192	19		
D	191	21		
E	159	57		
F				
G				
H				
I				
J				
TOTAL	949	51	+ 14.09'	

	JOINTS	LENGTH
PAGE TOTAL	48	963.60
BROUGHT FORWARD		
GRAND TOTAL		

REMARKS Top Row.
* Add (0.342' x 26 jts.) for collars = 14.09'
Show = 0.82'

Run in order.

- 34 - ENGINEER D. H. Bickell

E-15

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Canoex et al Dahadinni LOCATION M-43A

ENGINEER E. R. Larsen

DATE	WORK DESCRIPTION
Jan. 1/71	Mixing mud and rigging up to drill. Spudded in well 8-3/8" surface hole 9:45 p.m. Jan. 1/71. Drilling and pick up two 6" O.D. drill collars. Service rig.
Jan. 2/71	Drill and pick up 4-1/2" drill pipe. Ran Totco at 100', misrun. Ran Totco at 125', 1/2°. Drilling, mix mud, circulating and conditioning hole. Service rig.
Jan. 3/71	Drilling ahead 2 Totco misruns. Totco at 228 - 1°. Circulate hole, mix mud. Pump repairs, foreign matters getting to pumps. Rig service. Trip with bit #1 (drill).
Jan. 4/71	Run in hole with bit #2, bridge at 60'. Ream to 286'. Drilling, swivel repairs. Mix mud, work on pumps, Totco at 294 - 1°. Drilling, rig service.
Jan. 5/71	Drilling, clean pumps, drill head repairs. Mix mud. Rig service.
Jan. 6/71	Down time on shaker, pumps, rig and mud tanks. Drilling. Twisted off 4-1/2" pipe at 65' (pipe failure). Standby.
Jan. 7/71	Ran in hole to 90' with 3" spear Fish top at 65'. Unable to engage fish. Ran in with 6-1/8" O.D. overshot to 90', unable to engage fish at 65'±. Mix mud, clean out cellar to recement conductor pipe, cement around conductor barrels failed when jagged end of fish cut cement and barrels, mud going under rig matting. Wait on fishing tools. Clean up and repairs to rig and equipment.
Jan. 8/71	Wait for tools, mix mud, clean up, rig repairs. Make up and run 8-1/8 O.D. overshot to 90', unable to engage fish going past fish top at 65'.
Jan. 9/71	Ran in with 8-1/8 O.D. overshot and wall hook unable to engage fish from 65' to 116'.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Condor et al Dahadinni LOCATION M-43A

ENGINEER E. R. Larsen

DATE	WORK DESCRIPTION
Jan. 9/71	Continued .....
	Conductor pipe failed: Mix mud, and recement conductor pipe. Wait on cement. Ran in with fishing tool, break circulation, conductor pipe failed (again). Set in water pumps to transfer mud from cellar to tanks.
Jan. 10/71	Circulating and fishing, kelly hose burst, repair same, lost mud, water pumps not working. Clean out cellar, pulled out fishing tools. Try to seal conductor pipe with AM.9 chemical (twice), fishing with 8-1/8 O.D. overshot, knuckle joint and wall hook.
Jan. 11/71	Fishing, check setting on knuckle joint and wall hook. Repair conductor pipe fishing, unable to repair conductor pipe fishing "DRY".
Jan. 12/71	Fishing with 8-1/8 O.D. overshot, knuckle joint and wall hook unable to engage fish 65' to 122' pulled out, rigged up 5" bailer and bailed hole to 15' below surface hole. Washed out to 36"+, layed down fishing tools, orders to abandon hole, 4:30 p.m. Jan. 12/71.
	Wait on abandonment program.
Jan. 13/71	Bailed hole to 45' "dry" cemented with 121 sax cement and 1 ft. and 2 ft. logs to surface. Completed cementing 3:30 p.m. Rigging down to move. Clean mud tanks.
Jan. 14/71	Rigging down to skid rig 30' "FAST". List of tools lost in hole, listed on Daily Drilling Log.
Jan. 15/71	Rig down lower mast, remove pump engines, tanks and manifolds. Steaming for new matting under rig.
Jan. 16/71	Rig down to skid rig. Continue rigging down. Lay down mast and tear out pumps and pump motors. Doubled up on "daylights" and left 1 man to tend boilers and thaw ground and mattings.

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Jan. 17/71	Rig down to skid rig.
-48°	Rig down drawworks, hoist, drilling head, motors, etc. Level ground
Icing	for new location. Unload supplier from Hercules aircraft in Norman Wells.
Jan. 18/71	Rig down to skid rig.
-51°	Level for matting. Unbolt sub base from matting. Loaded aircraft
Icing	in Norman Wells - icing conditions - aircraft turned back.
Jan. 19/71	Blasting for new location.
	Blast frozen ground for new location. Using small charges to avoid
	shattering ground. Aircraft arrived.
Jan. 20/71	Blasting for new location.
	Blast and excavate frozen ground for new location and run off ditch
	for cellar.
Jan. 21/71	Laying matting at new location.
	Move matting and remove 8" x 8" timbers from old location.
Jan. 22/71	Lay timbers for new location.
	Lay and level timbers for new location.
Jan. 23/71	Lay floor for new location.
	Level matting and lay floor for pump and motor room.
	NOTE: Only a limited quantity of sawdust and no polyethelyne was
	available. Insulation below the matting is therefore of questionable
	effectiveness. This could result in instability of the rig after
	break-up (This information is hearsay). D. H. Bickell
Jan. 24/71	Lay floor for new location.
	Lay floor in pump house and sub base. Place pumps and motors.

E-7

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Jan. 25/71	Rigging up. Full derrick into place. Place GM motors. Start putting up frame for motor room shelter.
Jan. 26/71	Rigging up. Raise derrick and erect prefabs. Place mud tanks and fit piping.
Jan. 27/71	Rigging up. Erect prefabs. Rig steam and electric lines.
Jan. 28/71	Rigging up. Rig up heaters and hang derrick lights. Line up mud tanks.
Jan. 29/71	Rigging up. Bolt mud tanks together. Place guard rails around crown. Rig pump manifolds.
Jan. 30/71	Rigging up. Mix 40 sks cement for cellar. Rig up desilter, geolograph, gas detector stand.
Jan. 31/71	Rigging up. Finish rigging up geolograph. Rig up safety clamp for power swivel.
Feb.1/71	Rigging up. Hang power tongs. Mix mud and repair leaks in mud tanks and line.
Feb. 2/71	Prepare to spud. Mix mud and work on shale shaker.
Feb. 3/71	Drilled 72' in 5-3/4 hrs. Depth 72' Spud new hole at 10:30 a.m. Feb. 2/71. W.O. trucks from Norman Wells. Drilled ahead. Conductor barrel washed out. Regrout conductor with

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 3/71	Continued .....
	300 lb. AM9 + 10 sax permafrost cement. Picked up additional 6" D.C.s and drilled ahead. Repair shale shaker. Connections very slow with large drill collars.
Feb. 4/71	Drilled 28' in 2 hrs. Depth 100'
-43°	Drilled to 100'. Circulate and condition hole while picking up shoe joint and installing baffle for plug. Baffle consisted of hardwood cross.
	Remove sub beams to pass 9-5/8" conductor. Run 3 joints 9-5/8" to 95'. Mix 59 sax permafrost cement. Pump down cemt. Install homemade cementing plug. Displace plug. Good returns.
	NOTE: Cementing water apparently not heated - slurry was approximately 32°F.
Feb. 5/71	W.O.C. Depth 100'
-40°F	Clean cement out of mud tanks.
	Dump mud tanks while W.O.C.
Feb. 6/71	Drilled 40' in 4 hrs. Depth 140'
-30°F	Mixed mud. No double box sub from 6" D.C.s to 8-3/4" bit. W.O. word
D. H. Bickell	from Norman Wells if bit sub left there in error. Not located. Lay
arrived on	down 6" D.C.s and pick up additional 5" D.C.s.
location	Found top of plug at 90'. Drilled out plug and had little resistance
3:15 p.m.	to 100' (T.D.). Could not detect any cement contamination (pH = 7.5
Feb. 5/71.	and uniform) - suspect cement may have been over displaced.
	Cement in annulus fill to ± 6' below G.L. Added cement from outside prior to drilling out.
	Initial circulation was returned between 9-5/8" after several minutes. 9-5/8" appears firm but safety lines have been attached to holes cut in top collar.
	Drilled to 140' with Bit #18 - 8-3/4" TT1A-Reg. Drilling rate in clay should be higher unless bit balling or clay frozen. Suspect there is

ALAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 6/71	Continued .....
	some permafrost as initial returns were very cold.
	Instructions given to keep Zeogel-salt mud system as cold as possible
	to prevent sloughing.
	Survey at 100' - 1/2°.
Feb. 7/71	Depth 327' Drilled 187' in 74-3/4 hrs.
-10°F	Drilled to 195'. Erected on boulder - install drilling head, pushed
Light Snow	through boulder and drilled ahead to 206'. Received bit sub for 6" D.C.
	P.O.H. Lay down 3 rods and pick up sub + 3-10" X 6" D.C.s. R.I.H. with
	new bit #2s - 8-3/4" T114-Reg. Bit #18 drilled 106' in 11 hrs.
	T2-B3-1 appeared to be balling. Changed bit in hope that #2B will go to
	±400'. Crew and rig set up very slow with tricone drilling equipment.
	Clay to 312' - sand-shale from 312'.
	Weight on bit 8 - 9m, RPM 60.
	Mud Weight 10.0, Viscosity 100 sec., ph 7.0.
Feb. 8/71	Condition hole to run 7" casing. Depth 405'
-10°F	Inspect 9-5/8" conductor. Pipe fill several inches to length of
Clear	retaining lines. Some mud returns behind 9-5/8".
	Drill to 405' - Penetration 4-6'/hr. in hard sand-shale series.
	Circulate and condition hole. Made dummy trip to casing shoe - several
	tight spots.
	Circulate and condition hole.
	Weight on bit 10m, RPM 75.
	Mud Weight 10.0+, Viscosity 57 sec.

E-7

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION H-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 9/71	Depth 405' Working casing in tight hole.
-20°F (±)	Continue circulating and conditioning hole. Deviation survey at 400'
	is 1°. Trip out. Hole tight, lay down singles to ream and clean to
	bottom. Nothing coming out on the shaker as hole is enlarged and
	pumps inadequate. Trip out. Lay down 6" D.C.'s and subs. Rig up
	and run in with 7" casing. Circulate and work tight hole at 280' -
	appears to be boulders.
	Mud Weight 11.0, Viscosity 90 sec.
	Bit #2B, 8-1/4" YSI-R made 199' in 25 hours.
	Bit Weight 12m, RPM 75. T6-B3-1.
Feb. 10/71	Depth 405' Working casing in bridged hole.
-20°F (±)	Continue to work casing. Would not go. Trip out with casing - wet.
	Trip in with 5" D.C.'s and rods. Break circulation and clean bridges
	below 270'. Mix and circulate 30 bbls. pill of +200 sec. viscosity
	mud. Took less than 30 bbls to fill pipe and hole but may be channelling.
	Trip out with rods and run in with casing to ±270' - casing would not
	go.
	Water Well Attempt:
	Western Geophysical Party 85 agreed to attempt the drilling of a water
	source well on the wellsite. Spudded 4-3/4" hole using air at 10:00 pm.
	0' - 25' Frozen grey organics with ice lenses.
	25' - 35' Increased clay content - minor ice.
	35' - 70' Scattered gravel and ice boulders in clay.
	Indications of spotty permafrost.
	70' - 170' Predominantly clay with trace of water from minor gravels.
	170' - 180' Sand, fine, dry. Lost partial air returns. Hole tight.
	Pull out - very tight - abandon attempt at 3:00 a.m.

E-7

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni , LOCATION M-43A

ENGINEER D. M. Bickell

DATE	WORK DESCRIPTION
Feb. 11/71	Depth 405' Cleaning hole to rerun casing
-15° (±)	Continue to work casing in tight hole. Unable to circulate casing past bridges. Trip out with casing and run 8-3/4" bit #1B-RR to clean out. Ream bridges and circulate mud while adding salt and barites to increase mud weight. Repair pumps.
	Insignificant amount of fill coming over shakers.
	Mud Weight 13.0, Viscosity 90 sec.
Feb. 12/71	Depth 405' Washing casing in
Clear	Continue working drill string while repairing mud pumps. Hole not
-25°F (±)	cleaning. Pull out. Hole tight at 310' and 180'. Ran casing to 180'.
	Could not go by bridge. Rig cross-overs from 7" to power swivel.
	Circulate, rotate and work casing to 330'. Hole unloading some fill.
	GM motor went down during moderately severe load while working casing.
	Repair same.
	Two floormen got tangled up in kelly hose and lines and jammed between 48" pipe wrench and rotating head when driller kicked power swivel in while crew
	making up rods. Floormen very durable - driller terminated.
	Mud Weight 12.0, Viscosity 75 sec.
	Mud appears to be diluting from thawing permafrost.
Feb. 13/71	Depth 405' Mix cement for 7" casing.
	Work casing to bottom using power swivel. Loosen 7" collar for casing
	bowl. Hang and lash down casing 3' off bottom. Circulate casing
	while cleaning mud tanks and repairing pumps. Heat cementing water
	after wrong valve opened returning mud to mixing tank.
Feb. 14/71	Depth 405' Cleaning cemented up pumps
-20°F (±)	Rig to mix and displace cement. Mix 145 sacks Oilwell and add 2%
	$CaCl_2$. Pump motors working very hard to mix one full tank of slurry.
	Pump 8 bbl. warm water ahead, 15.3+ ppg slurry at 85°F, 16 bbl. water
	behind plug. No cement returns to surface.
	Plug bumped to 500 psi - O.K. - at 12:00 noon 13/2/71.

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dohadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 14/71	Continued .....
	Weld plate to close 7" - 9-5/8" annulus. Installed nipple on 9-5/8" and established circulation - no cement returns. Repair pumps, heat water and rig lines to cement down annulus and to surface outside of 9-5/8" casing. Mix 90 sacks normal cement and add 1% $CaCl_2$. Slurry weight 15.44 at 90°F. Pump 8 bbl. water flush, pump slurry. Again good mud returns but no cement to surface.
	Add more water to mixing tank - heat with all available steam lines. Mix 55 sacks normal and Oilwell cement + 2% $CaCl_2$. Pump 15.6 ppg slurry at 62°F. Pumps packed up with cement chips and undissolved $CaCl_2$ after 2 bbl. No water supply to clean pumps - no cement returns. Bail slurry out of mixing tank and tear down pumps, and mud manifolding.
	NOTE: Crews working very hard but lack of equipment and experience for oilfield operations. Toolpush and crew have never seen rotary drilling rig.
	Cut off 9-5/8" casing in cellar.
Feb. 15/71	Depth 405' Cleaning cement from pump equip.
Hazy	Feel cement 2" below cellar floor in 7" - 9-5/8" annulus - L.K.
-20° (±)	Spent whole day cleaning cement from pump manifold and pumps and cleaning out mud tanks.
Feb. 16/71	Depth 405' Nipple up
Hazy	Tag cement 20' below cellar floor with 2" pipe. Mix 26 sacks of Oil-
-15° (±)	well cement + 2% $CaCl_2$ to 15.3 ppg at 110°F in barrels and pumped down beside 9-5/8" casing. No cement returns. Bail mud and water from cellar. Feel top of cement 5' below cellar. Mix 5 sacks perma-
	frost + 6 sacks Oilwell cement + 1% $CaCl_2$ to 15.3 ppg at 110°F and pump down outside of 9-5/8". Cement to surface.
	NOTE: Returns are coming up ±6' from the borehole under the sub base. Lay down drilling head in order to drill rathole - drop same on steam line box after clearing prefabs - minor damages. Steam out mud tanks, clean shaker, drill rathole and haul material to

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 16/71	mix Invermul.
Continued	NOTE: Salt water from sump seeping through lower side of pit
	onto seismic line. This sump will not contain the
	Invermul effectively.
Feb. 17/71	Depth 405' W.O. Wellhead spool for BOP's.
Clear	Repair shale shaker and finish cleaning mud tanks. Repair mud
+0°F	hopper and fill mud tanks with diesel for invert mud. Cut out
	roof over rig floor in order to get power swivel into rat hole
	so driller can see monkey board. Screw on casing bowl and pick
	up and service BOP's. Add more diesel and attempt to mix mud
	while repairing pumps. Instruct Tool Push on importance of
	hopper jet size. Conclude that BOP hookup is unacceptable with-
	out spacer spool as cellar too deep and small to install BOP
	wheels and flare and kill lines. Order spacer spool. Mix mud
	while W.O. spool.
Feb. 18/71	Depth 405' Repair mud lines.
Clear	Attempt to mix mud - Invermul not dissolving Lost approximately
+0°F	20 bbls. Repair leaks in mud tanks - numerous flange bolts
	missing and several leaking welds. Received spool. Install
	BOP's while attempting to mix mud. Repair additional leaks in
	mud tanks. Repair desilter and rig kill lines. Fabricate
	hydraulics lines for BOP's and attempt to locate leaks in
	accumulator lines while attempting to mix mud. Repair mud lines.
Feb. 19/71	Nipple up BOP's and attempt to gun Invermul up. Lost additional
Clear	5 bbl. diesel from tank leak - transfer mud and repair leak in
+0°F	patch weld. Add more diesel. Mix additional 20 sax cement and
	displace to 9' below cellar floor - obtained good cement returns.
	Modify BOP hookup in order to have kill and flare lines below
	lower rams - modify cellar framing to get valving in. Add diesel
	and mix mud.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 20/71	Depth 405' Prep. to drill cement.
	Nipple up BOP's while mixing mud. Repair additional leak in
	mud tanks. Rig hydraulic BOP lines and work on accumulator
	lines. Change one damaged blind ram. Rig to pressure test
	BOP's. Pressure blind rams and look for leaks. Repair leaks
	in accumulator lines and replace leaky valve on mud manifold.
	Pressure test blind rams to 1250 psi for 30 minutes. Okay.
	Trip in with 6¼" bit #1C - YM-Reg., 16 - 4-3/4" DC's and 4½"
	drill rod. Tag cement top at 359'. Put 3 bbl. diesel ahead
	and displace hole to Invermul mud. Pressure up on 3½" rams -
	drill string hydraulicing. Repair pump gasket, replace bent
	drill rod causing leak, and rig hold down to prevent hydraulicing.
	Test 4½" rams, kelly, cock and choke manifold to 1250 psig for
	15 minutes - okay. Test 3½" rams to 1200 psig - okay. Lay down
	3½" rod and pickup additional 4½" rod to drill out.
Feb. 21/71	Depth 552' Drilled 147' in 6¼ hours.
Clear	Drilled plug and insert - drilled 32' cement and shoe at 402'
±0°F	KB. Drill 6¼" hole. Weight indicator not working properly,
	no fluid on hand. Repair flowline and modify flow "T". Install
	quad. pump. Drill 6¼" hole. Repair leak in stand pipe. Drill
	6¼" hole. Survey at 474' - 1-3/4°.
	Mud wt. 7.5, viscosity 35, PV 6, YP 2, Gels 0/0 - Fluid loss
	3.2 cc - Oil. Emulsion 80% oil.
Feb. 22/71	Depth 728' Drilled 176' in 13 hours.
	Work on desilter pump. Drill 6¼" hole. Reduce bit weight
	because of hole deviation. Trip for new bit due to slow pene-
	tration. Bit #1C - 6¼" YM-Reg. Made 281' in 15½ hours.
	T4 - B4 - I. Bit wt. 6-12m, RPM 75-100+. Ran in with bit #2C
	6¼" YM-Reg. Drill ahead. Noted partial lost circulation at
	± 700'. Probably occurred earlier. Mixed lost circ. material
	and regained full returns - drilled ahead.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 22/71	Repair wireline and power swivel. Mix mud - slow seepage
	loss to hole.
	Mud wt. 7.6, viscosity 34, PV 6, YP 2, Gels 0/0, Oil Loss
	3.4 cc. Oil Content 80%
	Surveys @: 600' - 3-3/4°
	670' - 4°
	700' - 3-7/8°
Feb. 23/71	Depth 870' Drilled 142' in 16½ hours.
Clear	Mixed lost circulation material. Drilled ahead. Sucked one
+ 5°(+)	tank dry and plugged bit with undissolved Invermul and cuttings.
	Trip for plugged drill string. Re-place bit. Bit #2C - 6½"
	YM Reg. Made 90' in 6-3/4 hours. T3 - B2-I. Bit wt. 6m. RPM 100-
	150+.
	Note: Overtime to pump out plastic - lined sump was caused
	by plugged shaker screen due to tank foul up and trip
	with wet string. Drilled ahead with bit #3C - 6½" YM
	Reg.
	Mud wt. 7.6, viscosity 35, PV 6, YP 2, Gels 0/0, Oil Loss 3.4
	cc. Oil content 80%.
Feb. 24/71	Depth 1 008' Drilled 138' in
Cloudy	Drilling ahead. Repair draworks feedoff. Drill to 888', losing
- 10°F (+)	mud - mix lost circulation material. Trip for bit due to slow
	progress. Bit #3C - 6½" YM-Reg. Made 116' in 18½ hours. Bit
	weight 6-10M (Daylight driller unable to see weight indicator
	and, therefore, hold bit weight at 6M as directed - requested
	replacement.) RPM 150+ Bit balling. Ran in
	with bit #4C - 6½" YM-Reg. Drilled ahead.
	Mud wt. 7.6, viscosity 36 sec., PV 6, YP 0, Gels 0/0, Oil Loss
	3.4 cc, Oil Content 80%. Survey @ 900', 4½°.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Feb. 25/71	Depth 1 137' Drilled 129' in 16½ hours.
Overcast	Drilled to 1 048' with bit #4C - 6¼" YM-Reg. Bit wt. 6m
-20°F (±)	125 ª. Drilled 160' in 22½ hours.
	Ran in with bit #5C - 6¼" 451-Reg. Drilled to 1 137', cir-
	culated sample.
	Mud wt. 7.8, viscosity 37 sec., PV 6, YP 0, Gels 0/0, Oil Loss
	3.2 cc, Oil Content 80%.
Feb. 26/71	Depth 1 220 ' W.O. Tester.
Clear	Drilling with bit #5C - 6¼" YS1-Reg. Pressure up kelly hose,
- 25°F (±)	plugged bit from not circulating before connection. Kelly hose
	ruptured at 2000 psi. Repair same. Drill ahead to 1 220'.
	Clean and repair rig, survey and mix mud while waiting on
	tester. Attempt strap out during dummy trip - strap unaccept-
	able. Break down formation during trip - Contractor disregarded orders and
	kept fill-up line on continuously - pumped away most of mud.
Feb. 27/71	Depth 1 222' D.S.T. #1
Clear -25°F	Clean up and repair rig, mix mud and install testing line while
(±)	W.O. tester. Strap out - correct depth +2'. Pick up test tools
	and perform DST #1. Test mechanically successful. POH and lay
	down tools. Trip in with bit #6C.
Feb. 28/71	Depth 1 388' Drilled 166' in 13-3/4 hours.
Clear	Finish trip in with bit #6C - 6¼" YS1-Reg. Mix lost circulation
-20°F (±)	material and mud. Drill ahead. Repair weight indicator. With
	correct quantity of fluid in the lines, reads ½ of actual weight.
	Calculated string wt. 30m. Daylight driller cannot control bit
	weight - has poor eyesight and is hard of hearing. Broke wire-
	line while attempting to survey - repair same. Mix additional
	lost circulation material. Bypass shale shaker in an attempt
	to keep lost circulation material in mud system. Plugged bit
	due to failure to follow orders to circulate before connections.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell/L. J. Kasmar

DATE	WORK DESCRIPTION
Feb. 28/71	Start trip out.
continued	Mud wt. 7.7, viscosity 34 sec., PV 6, YP 0, Gels 0/0, Oil Loss
	3.6 cc, Oil content 80%, Survey at 1 300' - 5-1/8°
Mar. 1/71	Depth 1 440' Drilled 52' in 7½ hours.
Clear -25°	Trip out with plugged bit #6C - 6½", YSI-R. Drilled 166' in
(t)	13-3/4 hours. Bit wt. 6-'lm, RPM + 120 T-2/B-3/I. Dump
	desilter and shaker tanks - insufficient mud to drill ahead.
	Trip in with bit #7C - 6½" YSI-Reg. (Cut-out) - Could not main-
	tain suction due to additional mud loss from trip made
	because of plugged bit. Repair pump manifold. Attempt to by-
	pass several tanks in order to circulate lost circulation
	material without it settling - insufficient desilter capacity
	to keep up with mud pumps. Mix mud very slowly. Drill ahead
	while mixing mud and adding lost circulation material. Add
	Geltone and additional water to increase viscosity.
	Mud wt. 7.8, viscosity 42, PV 8, YP 2, Gels 0/0, Oil Loss 2.9 cc,
	Oil Content 75%. Survey at 1 400' - 4-3/4°
March 2/71	Depth 1 589' Drilled 149' in 16 hours.
Overcast	Drill ahead with no mud loss. Lost partial returns at 1 556'.
-30°F	Mix L.C.M. Drill ahead to 1 589'. Trip for bit. Bit #7C -
(t)	6½" YSI Rec. (cut out) Made 201' in 21-3/4 hours. T3 - B4-I.
	Bit wt. 6000 , RPM 120. Trip in with bit #8C-6½" YSI Reg. Slip
	out of gear, drop string in hole. Rig to fish.
Mar 3/71	Depth 1 589' Fishing - no progress.
	Repair elevators and spider damaged when fish dropped. RIH
	Open ended to fish with pin end. Screw into fish. Pick up 1000#
	wt. POH. Recover 60' of 4½" drill pipe - pin end broken off
	this section of fish. Make up and run in hole 3" Bowen internal
	spear grapple. Work into fish. Did not engage. POH and run
	in with 3½" internal grapple. RIH. Work into fish. POH with

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Mar 3/71	remainder of fish string.
continued	
Mar. 4/71	Depth 1 589' Fishing - no progress.
	G.E. Blue, Federal Conservation Board Officer inspected drill
	site and presented recommendations for repair and alterations
	that would be required before drilling ahead. Recover fish except
	for two bit cones. Make up and run in with 6" junk mill and
	basket. Hook up swivel and rotate 120' off bottom while mixing
	and conditioning mud. Mud required thawing out as the steam
	had been turned off from the heater coils at an unknown time
	and by an unidentified agent. Crew also working on repairs
	recommended by Conservation Board.
Mar. 5/71	Depth 1 589' Fishing - no progress.
	Mix and condition mud. Work junk mill over iron. Run junk mill
	1½' into bottom. POH did not recover core or iron. RIH with
	3" magnet. Circ. work magnet. POH. No recovery. Mix mud and
	repair rig to Conservation Board requirements.
	Mud wt. 8.0, viscosity 38, F.L. 3.6, Gels 1/1, Solids 3%, PV 9,
	YP 2, Oil/Water 76/24.
Mar. 6/71	Depth 1 589' Fishing - no progress.
	Mix mud while waiting on larger diameter magnet and mill. Re-
	pair rig to Conservation Board requirements. RIH with 5-3/4" magnet.
	Circ. and fish. POH. Recovered 1 cone and 26 bearings. RIH
	with mill shoe guide on 5-3/4" magnet. Circ. and run magnet.
	POH and recover third cone and remainder of bearings.
	Mud wt. 8.0, viscosity 38.
Mar. 7/71	Depth 1 676' Drilling 87' - 6½"
	Make remainder of repair and alteration to rig according to the
	Conservation Board's recommendation. Work consisted of:

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Mar. 7/71	1. Hand rails installed at
continued	a. Steps to mud tank.
	b. Steps from engine floor to rig floor.
	2. Covered working area above mud pits with grating.
	3. a. Heater installed below floor adjacent to BOP's.
	b. Gauge on blowdown manifold changed to 0-300 psi
	scale. Blowdown manifold closed in and heated with
	a steam rad.
	Blowdown line extended to 151 feet from center of
	well.
	4. All work areas cleaned up.
	5. BOP drill conducted with crew.
	6. Driller provided with door and stair to outside from his
	work position, formerly he had no exit to his work area.
	7. The rig will be provided sometime in the future with a
	conventional dog house.
	8. Boiler safety valves vented to outside of shack.
	9. First aid kit installed in floor area.
	Attempt was made to contact B. Thoms of the Department of Indian
	Affairs and Northern Development for approval to drill ahead and
	as contact could not be established it was decided to drill ahead.
	Drill. Repair wireline hoist cable. Survey. Drill.
	Surveys: 4½° @1600 ft.
	Mud:
	Wt. 7.8, Vis. 38, F.L. (HT/HP) 2.2 cc, Gels 1/1, Solids 2%,
	PV 9, YP 3, % Oil 76
Mar. 8/71	Depth 1 796' 120' - 6½"
	Drilling and surveying. Intermittent slow loss of circulation.
	Adding LCM - Fine Micatex and Walnut at suction.
	Surveys: 4½° @ 1600' 5½° @ 1760'
	5½° @ 1700' 5-3/4° @ 1780'
	5-3/4° @ 1740

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Mar 8/71	Mud:
Continued	Wt. 7.9, Vis. 38, F.L. (HT/HP) 2, Gels 2/2, Solids 2%, PV 10,
	YP 5, % Oil 77
	Contact B. Thoms and receive approval to drill ahead.
Mar. 9/71	Depth 2 009' Drilled 213' - 6¼"
	Circ. Rig repair. Drill. Circ. and survey. Drill. Circ. and
	survey. Drill. BOP drill. Drill and surveying.
	Surveys: 5-3/4° @ 1820
	5-3/4° @ 1870
	6° @ 1920
	5-3/4° @ 1970
	Mud:
	Wt. 8.6, Vis. 40, F.L. (HT/HP) 3.6, Gels 1/3, % Solids 4, PV 10,
	YP 4, % Oil 74
	Slight loss circulation. 24 hour loss - 15 Bbl. to formation.
	Adding lost circ. material.
Mar. 10/71	Depth 2 101' Drilled 92' - 6¼"
	Drill, Circ. and surveying. Rig up stabbing valve. POH with
	bit No. 10C, 6½" Reed YT1A-R.264' in 24½ hours. T2-B6-GI.
	RIH with bit No. 11C, 6¼" Reed YT1A-R. Water courses cut out.
	Rig repair - work on power tongs. Drill.
	Surveys: 5¼° @ 2020'
	5° @ 2060'
	Mud:
	Wt. 8.2, Vis. 36, F.L. (HT/HP) 3.2, Gels 1/2, % Solids 4, PV 7,
	YP 3, % Oil 77
	Mud loss 30 Bbl./24 Hrs. Est. 10-15 Bbl. to formation remainder
	to surf leaks.
Mar. 11/71	Depth 2 298' Drill 197' - 6¼"
	Drill and Surveying.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Mar. 11/71	Surveys: 4¼° @ 2100'
continued	4° @ 2150'
	4° @ 2200'
	Mud:
	Wt. 8.1, Vis. 36, F.L. (HT/HP) 4.4, Gels 1/2, PV 9, YP 1
	Very minor mud loss to lost circulation.
Mar. 12/71	Depth 2 399' Drilled 101' - 6¼"
	Drill and survey. POH with Bit No. 11C - 6¼" Reed YT1A-R.
	232' in 24-3/4 Hrs. T2 B6 GI. RIH with Bit No. 12C, 6¼"
	Reed YS1-R. Water courses cut out. Drill.
	Surveys: 4-1/8° @ 2300'
	Mud: 8.2
	Wt. 8.2, Vis. 38, F.L. (HT/HP) 8.6, Gels 1/3, % Solids 7,
	PV 10, YP 1, % Oil 74
	Lost approximately 15 Bbl. mud.
Mar. 13/71	Depth 2 508' Drilled 109' - 6¼"
	Drill and surveying. POH with Bit No. 12C, 6¼" Reed YS1-R,
	139' in 22½ Hrs. T2 B6 GI . RIH with Bit No. 13C, 6¼" Reed
	YT1-R. Water courses cut out. Rig repair. Work on power tongs.
	Drill.
	Surveys: 4½° @ 2400'
	Mud:
	Wt. 8.1, Vis. 36, F.L. (HT/HP) 10/4, Gels 2/4, PV 11, YP 3,
	% Oil 72, mud patchy, very minor, lost circulation.
Mar. 14/71	Depth 2 666' Drilled 158' - 6¼"
	Drill and survey. Dump desilter and shaker tanks.
	Surveys: 4° @ 2 500'
	4° @ 2 600'
	Mud:
	Wt. 8.6, Vis. 37 - 52 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasnar

DATE	WORK DESCRIPTION
Mar. 15/71	Depth 2 774' Drilled 108' - 6¼"
	Drill. POH with Bit No. 13C, 6¼" Reed YT1A (cut out) 188' in
	25½ hours. T2 B6 GI. Check BOP's. RIH with Bit No. 14C,
	6¼" Reed YS1 (cut out). Drill and survey. Increase mud volume
	3-4 Bbl.
	Surveys: 4° @ 2700'
	Mud:
	Wt. 8.7, Vis. 40, F.L. (HT/HP) 4.4, Gels 2/2, % solids 6, PV 11,
	YP 4, % Oil 74.
Mar. 16/71	Depth 2 803' Drilled 29' - 6¼"
	Drill. Power swivel seized. POH. Change out power swivel to
	rotary head. Bit No. 14C, 6¼" Reed YS1 128' in 24 hours.
	T3 B6 GI. RIH with Bit No. 15C, 6¼" Reed YT1A (cut out). Drill.
	Making slight mud volume.
	Mud:
	Wt. 8.7, Vis. 40, F.L. (HT/HP) 4.4, Gels 2/2, % Solids 6, PV 15,
	YP 4, % Oil 69.
	Apparently water percentage in mud increasing.
Mar. 17/71	Depth 2 857' Drilled 54' - 6¼"
	Drill and survey. Bearing in transmission on hoist badly worn.
	Not safe to trip. Circulate and rotate while waiting on re-
	pairs. Also U/S Oilwell pump transmission needs repair.
	Surveys: 4½° @ 2800'
	Mud: Wt. 8.8, Vis. 41
Mar. 18/71	Depth 2 857' Drilled 0'
	Rotate and circulate on bottom while waiting on transmission
	repairs and power swivel and Dodge coupling for Oilwell pump.
	Haul mud onto mud dock. Clean up rig. Service threads on 5"
	casing.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasnar

DATE	WORK DESCRIPTION
Mar. 19/71	Depth 2 857' Drilled 0'
	Wait on repairs. Receive transmission and power swivel from
	Kirkland Lake via Yellowknife. Install transmission. Re-
	move rotary head and install power swivel. Part for pump did
	not arrive. Hydraulic pump on hoist not operating. Repair.
Mar. 20/71	Depth 2 857' Drilled 0'
	Work on hydraulic motor on drawworks. POH with Bit No. 15C,
	6¼" Reed YT1A. 57' in 21-3/4 hrs. T8 B8 GI. Repair GM prime
	mover. RIH with Bit No. 16C, 6¼" Reed YT1A (cut out). Mud
	volume increasing for several days to this point. Make 5" in
	tanks during repair period (20 Bbl.). Water percent increased
	from 18% to 44%. Water from steam system or formation?
	Mud: Wt. 8.8, Vis. 58, F.L. (HT/HP) 2.2-TRH$_2$O, Gels 3/4, % Solids
	5, PV 27, YP 9, % Oil 51.
Mar. 21/71	Depth 2 883' Drilled 26' - 6¼"
	Circulate to Btm. No fill. Drill. Mix diesel and emulsifiers
	into mud to reduce percentage water (44%). Water from unknown
	source. One pump U/S. Can't drill and mix mud. Suspect water
	flow from fractured shale zone up the hole. Drill and survey.
	Dump desilter tank.
	NOTE: Long tooth bit not cutting well, even by varying weight, RPM, GPM.
	carbonaceous limy shale.
	Surveys: 4° @ 2860'
	Mud: Wt. 8.4, Vis. 55, F.L. (HT/HP) 4.8-0.5% H$_2$O, Gels 2/2
	% Solids 5, PV 27, YP 8, % Oil 52.
Mar. 22/71	Depth 2 930' Drilled 47' - 6¼"
	Drill. Circulate. POH. Check BOP's. Bit No. 16C, 6¼" Reed
	YT1A. Drill 28' in 17-3/4 hours. T6 B8 GI. RIH with Bit No.
	17C, 6¼" Security S88 (3-16). Slip and cut line. Drill.
	Survey. Making slight volume in mud tanks. Loss of 3/4" in

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Mar. 22/71	late p.m. Take off desilter to add solids to raise weight.
continued	Surveys: 4° @ 2900'
	Mud: Wt. 8.5, Vis. 60, F.L. (HT/HP) 2.2, Gels 2/2 % Solids 5,
	PV 32, YP 8, % Oil 57.
Mar. 23/71	Depth 2 995' Drilled 65' - 6½"
	Drill and survey. Transfer 38 drums - 44% water/51% diesel
	out of mud system. On March 20 transfer 20 drums of same
	out of mud system.
	Surveys: 4-3/4° @ 2960'
	Mud: Wt. 8.5, Vis. 50, Gels 1/2, % Solids 4, PV 21, YP 3,
	% Oil 55%.
Mar. 24/71	Depth 3 033' Drilled 38' - 6½"
	Drill and survey. Starting to make volume into mud tanks.
	Surveys: 5½° @ 3000'
	Mud: 8.5, Vis. 60, % Solids 5, % Oil 38
Mar. 25/71	Depth 3 037' Drilled 4' - 6½"
	Drill. Very Slow. Bit comes locked? Making mud volume.
	Percent water increased to 58%. Add Baryte and mix mud while
	drilling. Mud Wt. to 9.5. Volume stable. POH with Bit No. 17C
	6½" Security 588 (3-16) 152' in 64 Hrs. (T1 B8 G1). Check hole
	on way out for mud loss or gain. Pump 60 drums (77 Bbl.) out
	of surface system. Mix new mud and circulate into surface system.
Mar. 26/71	Depth 3 075' Drilled 38' - 6½"
	Mix mud. Add Wt. material to 9.3#/gal. RIH with Bit No. 18C,
	6½" Security M4NJ (7,7,9). Repair power swivel. Break circu-
	lation one half way in. Circulate 50' to Btm. Drill and survey.
	Surveys: 6° @ 3050'
	Mud: Wt. 9.3, Vis. 60, F.L. (HT/HP) % Solids 6, %Oil 50.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Mar. 27/71	Depth 3 085' Drilled 10' in 3½ hours.
Clear	Drilled to 3 058' - POH laying down to Tuboscope. Found one
-30°F	bad 3½" drill rod. Changed power tongs. Picking up drill
	string. Bit #18C - 6¼" H4N w/ 7-7-9. Drilled 38' in 12 hrs.
	Bit Wt. 3500, RPM 150. T2-B7-I.
	Mud Wt. 9.6 (added wt. material) Vis. 63 sec.
Mar. 28/71	Depth 3 122' Drilled 37' in 4-3/4 hours.
	Finished picking up 3½" drill rod. Lost 4 hours + 50 Bbl. mud
	from leak in mud tank. Unable to pick up mud because:
	1. Mud freezing due to high concentration of formation water.
	2. Sump #1 full as transfer pump was +2 months late in arriving.
	Mud in sumps partially frozen and cannot be salvaged.
	Mixed mud. Worked on plugged pump suctions. Washed and reamed
	to bottom - hole a little tight but little fill. Drilled ahead
	with Bit #19C - 6¼" S3 w/ 7-7-9.
	Survey @ 3100' - 5-7/8°.
	Mud wt. 9.6, Vis. 56 sec. 6% solids - liquid phase = 60% oil.
	OBSERVATION:
	Since I departed on March 3, 1971, most of the improvements
	demanded by the Board have been attempted. There appears to
	be no real interest in conducting an efficient operation if
	it involves the hiring of extra hands or the expenditure of
	Heath & Sherwood capital. I do not expect any change - at
	least improvement - in efficiency.
Mar. 29/71	Depth 3 293' Drilled 171' in 18½ hours.
	Deviation surveys and connections very slow. Drilled to 3 293'
	w/Bit #19C - 6¼" S3 w/ 7-7-9. Drilled 208' in 23 hours. WOB=
	3-4m RPM = ± 150.
	Surveys @ 3150' - 6°
	3200' - 6° 3250' - 6¼°

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Mar. 29/71	Mud wt. 9.6, Vis. 58 sec., PV 23, YP 9, Gels 2/4, Solids 7%,
continued	Oil in liquid phase = 61%.
Mar. 30/71	Depth 3 354' Drilled 61' in 6-3/4 hours.
	Trip out for new bit. Bit #19C - 6½" S3 W/ 7-7-9. Out at 3 293'.
	Drilled 208' in 23 hours. T2-B7-I. Changed worn and kinked
	drilling line. Hole flowed slightly during trip. Trip in with
	Bit #20C - 6½" OSC1G w/3-8's. Drill ahead with no significant
	mud loss or gain.
	Survey at 3 300' - 5-3/4°.
	Mud wt. 9.7, Vis. 60 sec., Oil % = 60%, PV 25, YP 11, Oil Loss
	2.2 ml.
Mar. 31/71	Depth 3 475' Drilled 121' in 16-3/4 hours.
	Drilling ahead with Bit #20C. Lots of rig repairs. Very slow on
	connections and surveys. Circulate and start out of hole.
	Surveys at 3 365' - 5-7/8°
	3 400' - 5-7/8°
	3 450' - 6°
	Mud wt. 9.8, Vis. 54, Gels 4/6, Solids 9%, F.L. 2.7 ml. P.V. 23,
	YP 12, Oil - 63%.
Apr. 1/71	Depth 3 522' Drilled 47' in 14 hours.
	Finished trip out with Bit #20C - 6½" OSC1G w/3-8's. Drilled
	182' in 23½ hours.
	Bit wt. 4m, RPM 125+, T2-B7-I. Repair leaks in mud manifold.
	Trip in with Bit #21C - 6½" OSC1G w/3-8's. Drilled ahead very
	slowly.
	Survey at 3 500' - 6½°
	Mud wt. 9.6, Vis. 52, F.L. 3.2 ml., Oil 66%.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Apr. 2/71	Depth 3 556' Drilled 34' in 14 hours.
	Drilled to 3 522' with Bit #21C - 6½" OSC1G w/3-8's. Bit wt.
	4-5m, RPM 125+, Made 47' in 14 hours, T2-B7-I. Trip out.
	Repaired hydraulics system in an attempt to obtain reasonable
	drawworks horsepower. Run in with Bit #22C - 6½" OWV w/3-8's.
	Drilled 34' in 14 hours - slow drilling rate unexplained unless
	threshold drilling weight is too high for available or advisable
	weight.
	Mud wt. 9.7, Vis. 53 sec., F.L. 3.8 ml., Gels 3/5, Solids 8%,
	PV 20, YP 12, Oil in liquid 62%.
Apr. 3/71	Depth 3 568' Drilled 12' in 8-3/4 hours.
	Survey, mix mud pill, and prepare to trip. Trip out with #22C,
	T2-B7-I. Pick up Bit #23C - 6½" S88 w/ 7-9-9. Pick up Drilco
	rubber sleeve non-rotating stabilizer.
	Drill with 8m on bit and 60 RPM. Formation apparently too soft
	or'waxy'. POH with button bit (T1-B1-I). Pick up Christiansen
	Diamond bit and diamond reamer. Trip in.
	Survey at 3 550' - 6°.
	Mud wt. 9.7, Vis. 50 sec., F.L. 38 ml., Gels 3/5, Solids 9%, PV 20,
	YP 12, Oil 64%.
April 4/71	Depth 3 579' Drilled 11' in 7-3/4 hours.
	Trip in slowly with diamond assembly. Ran through tight spot
	at 2 834' - 4' free travel - reamed down 6' - still tight.
	Reamed up 4' and came free. Concluded risk too high due to
	crews inexperience and tight hole, pulled diamond assembly.
	Picked up rock bit - Drilco stabilizer still in string. Ran
	Bit #25C - 6½" OBV w/3-8's. Bit torquing after 7-3/4 hours. POH.
	Mud wt. 914, Vis. 45, F.L. 3.6 ml., Gels 3/5, Solids 8%, PV 22,
	YP 13, Oil in liquid phaze 65%.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Apr. 5/71	Depth 3 600' Drilled 21' in 11½ hours.
	Finished trip out with Bit #25C - 6¼" ODV w/3-8's. Drilled
	11' in 7-3/4 hours. T2-B4-I. Bit wt. 8m, RPM 100+.
	Pushed rubber stabilizer down the hole with the bit. Made up
	spear teeth on 3½" rod - ran in but unable to recover rubber.
	Lay down stabilizer for this bit run.Change bits and RIH. Did
	not feel rubber. Repair shaker and hydraulics - something wrong
	with hydraulics system but no one knows what. Recovered 43 bbl.
	good mud from lower sump. Drilled ahead very slowly with Bit #
	26C. Mud wt. 9.3, Vis. 44 sec., Gels 3/6, Solids 9%, F.L. 4.1 ml.,
	PV 18, YP 10, Oil in liquid phase 74%.
Apr. 6/71	Depth 3 629' Drilled 29' in 14½ hours.
L/Snow -5°F	Drilled to 3 605' with Bit #26C - 6¼" YT1A Reg. Made 26' in
	16¼ hours. Bit wt. 4-5m, RPM 125-130. T2-B6-I.
	Survey, pump pill and trip out for bit change. Ran bit #27C - 6¼"
	OSC3 w/3-8's,
	Mud wt. 9.3, Vis. 43, Oil loss 3.6 ml., Gels 3/5, Solids 10%,
	PV 16, YP 9, Oil in liquid phase 68%.
	Survey at 3 600' - 5-3/4°
Apr. 7/71	Depth 3 646' Drilled 17' in 12-3/4 hours.
Blizzard	Drilled to 3 646' with Bit #27C - 6¼" OSC3 w/3'8's
-5°F	Drilled 37' in 22½ hours. Bit wt. 6-9m, RPM 60-90. T2-B6-I.
	Trip in with rerun Bit #23C - 6¼" S88. Mud wt. 9.5, Vis.47 sec.,
	F.L. 4.8 ml., Gels 2/5, Solids 10%, PV 17, YP 9, Oil in liquid
	phase 71%.
	Survey at 3 635' - 5°.
Apr. 8/71	Depth 3 678' Drilled 32' in 22 hours.
Overcast	Finish trip in with Bit #23C - 6¼" S88 rerun. Lengthy discussion
	regarding operational problems with H & S's Dave Lapinskie.
	Survey at 3 655' - 5°.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell

DATE	WORK DESCRIPTION
Apr. 8/71	Mud wt. 9.4, Vis. 45 sec., F.L. 4.4 ml., Gels 3/5, Solids 10%,
continued	PV 19, YP 9, Oil in liquid phase 71%.
Apr. 9/71	Depth 3 706' Drilled 28' in 19½ hours.
Snow -15.F	Drilled to casing point of 3 706'. Made dummy trip.
	Problems with mud solids caused by gunning tanks.
	Surveys at 3 680' - 3 706' - 4½°.
	Mud wt. 9.3, Vis. 44 sec., F.L. 4.8 ml., Gels 3/5, Solids 14%,
	PV 20, YP 10, Oil in liquid phase 72%.
Apr. 10/71	Depth 3 703' Laying down drill collars.
L/Snow	Finished dummy trip. Circulated and W.O. Schlumberger. Mix pill
-10°F	and trip out. W/Bit #23C - 6¼" S88 rerun. Made 60' in 41½ hours.
	Bit wt. 7m, PPM 60+, 11-87-0 1/8". Strap out - correct - 3'.
	Rig up Schlumberger - Ran Dual Induction S-GR Cal, Density -
	Schlumberger TD 3 702'. Rig down Schlumberger and trip in with
	drill collars + 4½" drill rod. Lay down 4½" drill rod to run
	casing.
	Mud wt. 9.3, Vis. 43, F.L. 3.8 ml., Gels 3/5, Solids 9%, PV 15,
	YP 8, Oil in liquid phase 75%.
Apr. 11/71	Depth 3 703' Rig to cement.
Clear, -10°	Finished laying down 4½" rod and drill collars. Change one set
F	of rams to 5". Rig up and run 179 jts. 5", 13# K-55, 8rd casing
	with HALCO guide shoe and baffel insert. Flow T assembly too
	small to pass casing slips, rig out floor beams and remove flow
	T. Circulate casing at 3 700' and prepare to cement.
	Mud wt. 9.3, Vis. 43 sec.
Apr. 12/71	Depth 3 703' N.U. BOP's
Clear,	Haul cement and water, mix gel and CFR-2 in mix water.
-15°F	Pump 5 bbl. diesel + 10 bbl. water. Mix and pump 320 sax
	Oilwell cement + 4% (equivalent) gel + 0.5% CFR-2 to 14.0 ppg

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. H. Bickell/D. L. Tufts

DATE	WORK DESCRIPTION
April 12/71	followed by 40 sax Oilwell neat @15.0 ppg. Release plug and
continued	displace with water. Halliburton unit stopped after 52 bbl.
	of displacement. Rig up to displace with rig pump. Insufficient
	horsepower and inadequate motor mounts. Start HALCO unit.
	Pressure to 1700 psi. Formation taking slurry. Finish pumping
	plug at 2400 psi. Bump to 2750 psi - held okay. Rig down HALCO
	and set casing slips. Clean rig and mud tanks - barrel Invermul
	mud. Nipple down 3000# BOP's and rig up 5000# stack.
April 13/71	Depth 3 703'
Clear +30	Set Series 1500 (5000#) BOP stack and started nippling up. Could
	not set in place as assembled due to lack of space in substructure.
	Had to take off wing valves and turn them over so they could be
	operated. Choke manifold connections would not fit and manifold
	has to be moved. BOP hydraulic lines all had to be refitted with
	H.P. pipe to fit new stack. Had to cut away part of the kelly
	rat hole sleeve to allow passage of the check valve in the kill
	line. The substructure is not adequate size for so much equipment.
	BOP's sufficiently rigged to start pressure testing at 8:00 a.m.
	Shipped Schlumberger, Halliburton and Christensen equipment via
	Tower Trucking p.m. April 12, 1971.
April 14/71	Depth
	Pressure tested blind rams to 3000 spig for 10 mins. Held okay.
	Unable to test at higher pressure with rig equipment (safely).
	Removed pop valves and installed bull plugs to get pressure to
	3000 psi. Pump manifold and valves leaked badly. Spent most of
	morning repairing leaks. Ran a stand of pipe in the hole and
	started testing the pipe rams. The top pipe rams and hold down
	tested to 3000 psig for 10 minutes. Okay. It was found that the
	BOP stack had been shipped with the wrong size 2⅞" pipe rams in the
	bottom Schaefer. We could not test this section of the stack as
	there were no spare rams on the location. A set had to be ordered

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
Apr. 14/71	out of Edmonton. Completed rigging up flow-tee, flow line,
continued	Floor beams and plates. Hauled salt, water and chemicals and
	mixed polymer mud system. Limited to mixing 30 bbls. at a time
	due to equipment size. Mixing pump broke down and had to be
	repaired. Took 8½ hours to mix 220 bbl. system. Moved the
	choke manifold and tied it into the BOP stack. Ran in the hole
	with a tooth bit to drill out. Tagged top of cement at 3 612'
	KB, plug at 3 616'. Plug 70' high. The drill out was delayed
	due to time required to rig up BOP equipment and install splash
	pan in rig floor.
	Mud properties: Wt. 9.0#, Vis. 40
	Equipment out of order for taking water loss. Mild weather
	resulting in bad lease condition. Require both tractors to haul
	water up the hill from the river. Have one water storage bladder
	filled. Balance of tractor time spent hauling salt and cleaning
	up junk around the rig.
April 15/71	Cored 35' in 4½ hours. Depth 3 743'
+50	Drilled cement and plugs. Drilled out to shoe. Attempted to
Clear/Mild	pressure test casing again. Pressured to 3000 psig. Bled off
	slowly due to several leaks in pump manifold again. While testing
	leaks in system crew left bleed off line open and pumped 50+ bbls.
	of mud out onto ground. Lost total of 80+ bbls. due to careless-
	ness and leaks during daylight shift. Drilled 3 ft. of new hole.
	pulled out to pick up core barrel. Ran in with new Diamond Bit
	#1D (481-266). Reamed cement and new hole to 3 708'. Started
	coring.
	Mud wt. 9.0, WL 4.0, PH 11, % Oil 2.0, Vis. 40, PV 11, YP 4,
	Cake 1/32
	Drilling wt. 5000#, Pump Pressure 250 - 300 psi.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 16/71	Depth 3 786' Cored 43'
+ 40°	Coring satisfactory at 4-5 minutes/ft. Experiencing trouble
Clear/Mild	running and retrieving inner barrel due to rubber in hole and on
	top of barrel. Rubber is apparently from the cementing plug which
	was drilled earlier. Pieces of rubber have somehow got into the
	circulating system. Made two complete round trips with the drill
	string to retrieve the core barrel. Also shut down and replaced
	the pipe rams in the lower Schaefer BOP. Spread insulation under
	substructure. Both tractors working to haul water to fill the
	storage bladders.
	Mud wt. 9.0, Gels 1, PV 15, pH 10.5, Cake 1/32, Vis. 42, Solids 2%,
	YP 10, Oil 2%, Cl 63 000, Ca_{++} 200.
	Deviation survey at 3 759 - 5-3/4°.
April 17/71	Depth 3 883' Cored 97'
Clear	Coring consistantly at 4-6 minutes/ft. Still having occassional
+20	problems caused by fragments of rubber. Wire line broke while
Windy	retrieving core #7. Had to trip drill rods to retrieve the core
	barrel. Repaired overshot and wire line. Ran back in the hole
	with Diamond Bit #3D. Cut core #8, 9, 10 and 11.
	Mud properties holding satisfactorily.
	Mud wt. 9.1, WL 3.5, pH 10, Vis. 40, PV 14, YP 7
	Drilling wt. 3000, RPM's 250
	Deviation: 3800 - 4½°
	3850 - 4-3/4°
April 18/71	Depth 3 966' Cored 93'
+ 30°	Cut cores 12-15 inclusive. Penetration rate dropped off to 10-12
Clear/Mild	min./ft. Probably due to higher mud wt. and viscosity plus re-
	duction in wt. on bit in an effort to control deviation. Crew
	pulled bit to check diamonds. The bit was in excellent condition.
	Put on new bit Diamond 4D-HSQ HSI 247. Started back in hole.
	Core handling and recover as well as round trips are taking much

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 18/71	longer than predicted. This is an area that needs a lot of im-
continued	provement. Drilling wt. 2500, RPM 250-300.
	Mud wt. 9.1, WL 4, PV 11, FC 1/32, Oil 2%, Vis. 43, pH 8.5,
	YP 8, Solids 2½%.
	The desilter is not knocking the solids as efficiently as it
	should. Mud weight is staying high in spite of the fact the
	desilter is running 24 hours per day and a stream of water is
	running in the mud tanks.
April 19/71	Depth 4 100' Cored 134'
+ 40°	Coring operations routine. Core cutting times are considered
Clear/Mild	good for the formation being cut and the weight being carried.
	Core retrieval times are too high resulting in reduced footage
	for the day. Drilling wt. 3000#, RPM 300
	Mud wt. 9.0 , WL ±4.0, PV 9, pH 8.0, Vis. 40, FC 1/32, YP 4
	Adding small stream of water to help control weight and viscosity.
	Penetration rate fairly consistant at 5-7 min./ft.
	Deviation: 3900' - 5-1/8°, 3950' - 4½°, 4000' - 4¼°
	The dikes around the mud sump have started to leak. Several inches
	of sump fluids leaked out under the dike into the muskeg and snow
	below the sump. Cats pushed fresh clay into the dike edges and
	stopped the flow at least temporarily. These fluids will no doubt
	find their way into the creek bed which leads to the Dahadinni
	There is so much snow and ice in and under the dikes it is going
	to be difficult to control this situation.
	Water storage bladders 75% filled. Started preparing logs for
	copter pad.
April 20/71	Depth 4 173' Cored 73'
Clear/Mild	Coring rate varied from 5-10 minutes/ft. Continued to run with
Low 10°	reduced weight on bit to help control deviation. Experienced
High 45°	high torque conditions the last 50'. Reduced RPM's for safety.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 20/71	Added Cutwell and Mica-fine to help reduce torque. Well flowed
continued -	slightly on connections and while retrieving core. No evidence
	of gas cutting and no measurable increases in mud tank volumes.
	Core tube broke in half while retrieving core #26. Had to trip
	drill string to retrieve the core. Ran back in the hole with
	new bit # Diamond 5D. Drilling wt. 2500 - 3000#, RPM's 150-250.
	Mud wt. 9.1, WL 5.0, PV 8, pH 8.5, Solids 2%, Vis. 40, FC 1/32,
	YP 2, Oil 0%.
	Installed Flow Sensor in mud flow line.
April 21/71	Depth 4 206' Cored 33'
Low 20°	After tripping in with the new bit Diamond 5D - Cored 2'. Pres-
High 50°	sured up. Tried to retrieve the core tube. It was broken off
Clear/Windy	again. Round tripped the drill string to retrieve the tube and
	service the barrel. Ran back to bottom and started coring again.
	Cored 2'. Pump pressured up. Tried to retrieve tube. Overshot
	broke. Had to trip drill string again to pick up the core tube
	and repair the overshot. Ran back in the hole, cleaned to bottom
	and cored (#27) 18'. Retrieved the core and ran in with tube.
	Trouble breaking circulation. Pulled tube, checked and ran back
	in. Cored 14' (#28). Tried to retrieve. Tube broke in half
	again. Had to trip pipe again to retrieve the core. No apparent
	reason for tubes breaking. Drilling wt. 2500#, RPM's 150-250.
	Considerable hole torque being experienced. No notable drag on
	trips in and out.
April 22/71	Depth 4 245' Cored 39'
Low 10°	Had to make two more round trips to retrieve broken core tubes.
High 45°	The tubes are breaking at the mid jt., apparently on the way
Clear/Windy	in the hole or after coring has commenced. When they break
	they drop into the bit and shut off circulation. They are
	breaking at the threads. H & S were called at Kirkland Lake for
	advice. Their conclusion was the the breaks are caused by vibration.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 22/71	They suggested reducing weight on bit, RPM's and pump pressure.
continued -	They are shipping up rod grease to help reduce torque. In the
	meantime coring is being carried out using single 10' tubes.
	Cut cores #30, 31 and 32 with no problems. Penetration rate
	down due to low wt. and RPM's. Hole deviation would seem to
	be the most obvious problem affecting the rod torque and break-
	ing tubes. Drilling wt. 1500#, RPM's 100, Pump Pressure 200.
	Mud wt. 9.0, WL 6.5, pH 8.5, PV 7, Vis. 37, FC 1/32, Solids 2%,
	YP 1, Oil 2%.
April 23/71	Depth 4 275' Cored 30'
Low 20°	Cut cores #33, 34, and 35. Started cutting core #36. Had cir-
High 55°	culating problems. Pulled tube and checked. Ran back in.
Clear/Mild	Could not get to bottom. Pulled drill string to check tubes.
	Core barrel had broken off and stayed on bottom. The break was
	at the center stabilizer approximately 10' from bottom. Ran in
	with spear and fished the core barrel. Pulled out of hole. Ran
	in with mill to break up junk left in hole.
	Drilling wt. 1500#, RPM's 100, Pump Pressure 150-175.
	Mud wt. 9.1, Vis. 37-40, WL 6.5, pH 9.0
	Sent both tractors to the McKenzie River with a load of drill
	collars. Rocked collars on hill above river. River clean up
	cannot be completed as the bulk of the junk is frozen into the
	ice and will have to wait for more thawing before it can be
	moved. Dahadinni River started flowing during the day. Water
	3 ft. deep on top of the ice at the crossing. Unsafe for taking
	tractors across. Will have to postpone hauling the balance of
	the collars and BOP's to the McKenzie landing.
April 24/71	Depth 4 278' Cored 3'
Low 20°	Ran to bottom with tapered mill. Milled on junk for 4 hours.
High 50-55°	Reamed bottom 30' of hole. Pulled out and ran in with core
	barrel and reran bit to try to pick up milled junk in core tube.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 24/71	Cut 3' of core and bit started taking too much weight to cut.
continued -	Pulled out. Bit was fairly well scrubbed from drilling junk.
	Ran back in with another rerun bit. Rotated for one hour and
	made no progress. Pulled out. Bit badly damaged from junk in
	the hole. Rigged up to run in with a tapered mill again to
	work on junk.
	Mud wt. 9.1, pH 8.5, PV 7, FC 2/32, Solids 2%, Vis. 37, WL 5.5,
	YP 1, Oil 2%.
	NOTE: Started hauling (80-87) chopper fuel from Norman Wells.
	Three Otter flights today. This air strip is now
	clear of snow and very muddy but still okay for single
	Otters. McKenzie landing strip at mouth of Dahadinni
	no longer usable.
April 25/71	Depth 4 280'
	Finished running in with tapered mill. Milled on junk for
Low 25°	2½ hours. Pulled out of the hole and picked up the core barrel
High 55°	and a diamond bit and ran back in to cut core and try again to
Clear/Mild	get junk into tube on top of core. Reverse circulated while
	working down to bottom. Cut 2' of core in 35 minutes. Pulled
	inner tube and checked. Circulated hole then cut 3' of core in
	95 minutes. Pulled out of hole to check core bit. Still
	evidence of junk in the hole. Rigged up and ran in with Bowen
	Magnet with Texas tooth skirt on bottom. Mixed 5 Bbl. high-
	viscosity pill (140) and circulated one full circulation around,
	while working magnet. Started out of the hole.
	NOTE: This rig is poorly equipped with subs for fishing work.
	Mud wt. 9.1, pH 8.0, Vis. 37
	Flew in 5 Otter flights with Helicopter fuel. The air strip
	at this location is very muddy but still usable. No snow cover.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
April 25/71	Just mud and water.
continued -	
April 26/71	Depth 4 291' Cored 11'
Low 25°	Pulled out of the hole with the magnet. Recovered most of
High 60°	bearings and races that were lost. Rigged up a core barrel and
	new bit #7D and ran in hole to start coring. Strapped in. Tally
	checked okay. Greased the drill rods again on the trips in. Draw-
	works came unbolted from sub. Shut down for repairs. Cut 9' of
	core. Shut down 6 hours to string new wireline on retrieving
	drum. With a proper set up this should be a 30 minute job. Re-
	covered core #39. Had trouble getting core tube down hole again.
	Cut one foot of core and string started taking wt. Core barrel
	broke off again. Pulled out of hole. Core barrel had broken
	off at centre stabilizer. Rigged spear and started in hole to
	fish for core barrel.
April 27/71	Depth 4 310' Cored 19'
Low 20°	Ran in the hole with a spear and latched into the core barrel.
High 40°	Circulated fish and took Totco Survey. Pulled out with fish.
	Rigged up a new 20' core barrel and bit #7D. Ran back in the
Heavy Rain	hole to cut core #41. Cored at an average of 20 min/ft. Wire-
and snow	line retrieving unit broke down. Had to trip the drill string
	to retrieve the core. Checked every connection on the bottom
	500' of the drill string for metal failures on the way out of
	the hole. The inner core tube was broken in half again.
	Drilling wt. 1500#, RPM's 120, Pump 125 psi
	Mud wt. 9.0, WL 4.0, PV 9, FC 2/32, Oil 3%, Vis. 38, pH 8.5,
	YP 2, Solids 3%.
	No aircraft in today due to bad weather. Air strip very muddy
	and soft.
	- 68 -

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts/ L. J. Kasmar

DATE	WORK DESCRIPTION
April 28/71	Depth 4 317' Cored 7'
	Completed tripping out, checking tool jts. on the way out.
Low 10°	Waited on string stabilisers to be flown in (7 hours). Install
High 30°	stabilizers at 159' and 279'. Ran in the hole and cut Core #42
Overcast/	(7'). Retrieved the core and tried to run back in with core
Snow	tube. Found rod string had parted. Tripped out. Picked up
	spear and ran in to fish core barrel. Latched on to fish and
	pulled out of the hole.
	Drilling wt. 1500#, RPM's 100-150, Pump 125 psi
	Mud wt. 9.0, WL 4, pH 8, PV 11, YP 3, Vis. 40, FC 1/32, Solids 2%,
	Oil 4%
April 29/71	Depth 4 243' Cored 26'
Low 10°	Changed the position of the stabilizers and ran back in the hole.
High 35°	Cut core #43 (6'). Retrieved the core after jamming the barrel.
Overcast	Ran tube in and cut core #44 (13'). Shut rig down and repaired
Snow/Rain	hydraulic equipment on Wireline unit. Pulled core out. Ran
	tube back in the hole and cut cores #45 and 46. Coring at re-
	port time. Stabilization appears to have reduced vibration as
	coring is proceeding routinely. Coring time ranges from 12-20
	minutes per foot.
	Drilling wt. 1500#, RPM's 120, Torque 1500
	Mud wt. 9.0, WL 3.4, pH 8.0, PV 8, YP 4, Vis. 40, FC 1/32,
	Solids 2%, Oil 4%
April 30/71	Depth 4 416' Cored 73'
	Cut and retrieve core #45 (6'), #46 (20'), #47 (3'), #48 (8'),
	#49 (12'). Survey at 4 366'. Cont. cut and retrieve core #50
	(7'), #51 (4'), #52 (12')
	Drilling wt. 2000#, RPM 110/200
	Mud wt. 9.0, Vis. 36, Survey 5½° at 4 366'

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
May 1/71	Depth 4 456' Cored 40'
	Cut and retrieve core #53 (15'), #54 (4'), #55 (20'). Survey
	at 4 425'. Unable to pick up inner tube. POH. Core bbl.
	broken off at adaptor CPL. RIH with spear. POH and recover
	fish.
	Drilling wt. 2000#, RPM 200
	Mud wt. 9.1, Vis. 39, Survey 5½° at 4 425'.
May 2/71	Depth 4 515' Cored 59'
	Repair core bbl. RIH installing vertical rib stabilizers at
	39, 100, 162, 223.5, 285, 406.5, 528, 649 (Total - 8) off Btm.
	Cut core #57 (19'). Pull core tube. Broken at top of main
	tube. Fatigue break. Fish out tube with spear on Wireline.
	Repair tube, cut and retrieve core #53 (3'), #59 (5'), #60 (19'),
	#61 (14').
	Drilling wt. 3500#, RPM 200
	Mud wt. 9.0, WL 3.6, pH 75, PV 10, YP 8, Vis. 40
May 3/71	Depth 4 615' Cored 100'
	Cut and retrieved core #62, (20'), #63 (20'), #64 (20'), #65
30/60°	(20') and #66 (21'). Broke and fouled Wireline while retrieving
Clear	core #66. Cut out 4000'. Survey at 4500'.
	Drilling wt. 3500#, RPM 200
	Mud wt. 9.0, WL 4.4, pH 8, PV 10, YP 5, Vis. 40, Gels 1/1
	Survey 5½° at 4500'.
May 4/71	Depth 4 680' Cored 65'
30°	Cut and retrieve core #68 (20') and #69 (20'). Core from 4 675
Snow (6")	to 4 678'. Lost from inner bbl. and milled up. Cut and recover
	core #70 (2'). Attempt to run inner bbl. Would not seat.
	Survey. POH. Chk. inner and outer core bbl. Chg. bits. Bit
	#7D, 4¾, 25 Series out at 4680.399' in 81-3/4 hours. RIH with
	bit #8D.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni **LOCATION** M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
May 4/71	Drilling wt. 3000#, RPM 150
continued -	Mud wt. 9.1, Vis. 40, Survey 5½° at 4 650', 5¼° at 4 600'
May 5/71	Depth 4 803' Cored 123'
Slight O/C	Cut and retrieve core #71 (20'), #72 (20'), #73 (17'), #74 (20'),
35°	#75 (20'), #76 (20'). Repaired main hydraulic hose.
	Drilling wt. 3000#, RPM 150
	Mud wt. 9.2, WL 2.4, PV 10, YP 2, Vis. 40, Gels 1/1, % Oil 4,
	% Solids 6
May 6/71	Depth 4 889' Cored 86'
	Cut and retrieve core #77 (20'), #78 (20'), #79 (20'), #80 (20'),
Clear	#81 (11'). Survey at 4 750 and 4 850'. Twist off rods at
45°	3 818' while starting to cut core #82. Break at the base of
	pin. ROH and RIH with Boven spear.
	Drilling wt. 2000#, RPM 150
	Mud wt. 9.1, Vis. 39, Survey 6° at 4 750', 6° at 4 850'
May 7/71	Depth 4 952' Cored 63'
	RIH with spear and pick up fish. POH, found two breaks (lay out
	4 rods). Lay out 5 stabilizers with fatigue cracks. RIH with
	new bit. Bit pulled. Bit No. 8D, 4¾", Series 25, out at 4 889'.
	209' in 32 hours. Cut and retrieve core #82 (20'), #83 (20'),
	#84 (7'). Now cutting core #85.
	Drilling wt. 2000#, RPM 150
	Mud wt. 9.2, WL 4.8, PV 6, YP 3, Vis. 40, Gels 0/0, % Oil 4,
	% Solids 5
May 8/71	Depth 5 015' Cored 63'
O/C	Cut and retrieved core #85 (20'), #86 (20'), #87 (20'), #88 (13'),
	and #89 (6'). While cutting core #89 rods broke at 4 168'. Pin
	break as before. POH. Survey at 4 950'. Reduced bit weight
	because of deviation.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasnar

DATE	WORK DESCRIPTION
May 8/71	Drilling wt. 1800#, RPM 150
	Mud wt. 9.2, Vis. 40, Survey 6-3/4° at 4 950'
May 9/71	Depth 5 042' Cored 27'
Clear	RIH with Bowen spear. Pick up fish. POH. Remove 5 - 3½"
40°	steel rods. Broken at the pin. Three at 4 168' and 2 at 4 785'(midpoint
	Check core bbl. RIH. Cut and retrieve core #90 (19'), #91 (2'),
	and #92 (7'). Repair pump. Survey at 5 000'.
	Drilling wt. 1800#, RPM 150
	Mud wt. 9.1, Vis. 39, Survey 7° at 5 000'
May 10/71	Depth 5 063' Cored 21'
	Cut and retrieve core #93 (17'), #94 (2'). Twist off in steel
	rods. POH. RIH with spear. Pick up fish and POH. Trouble
	with motors. Water in fuel. Pick out 4 damaged rods. Check
	core bbl. RIH with new bit. Bit 9D out at 5 062'. 173' in
	39-3/4 hours. Start cut core #95. Rods broke at 4 482'. Add
	Micatex to mud to increase lubricity.
	Drilling wt. 1800#, RPM 150
	Mud wt. 9.0, Vis. 40
May 11/71	Depth 5 063' Cored Cored 0'
Clear	Attempt to recover inner bbl. Retriever would not pass 400'
45°	from btm. Trouble with water in fuel. Change fuel oil and
	motor oil filters. POH. RIH with spear. Top of fish at 4 757'.
	Pick up fish. POH. Steam cleaned and check pins on 3½" steel
	pipe. Did not detect any failures. Lay out all steel pipe but
	1 200' on top. No fish. Pick up all pipe and trip in with spear.
May 12/71	Depth 5 104' Cored 41'
Clear	Pick up all pipe and RIH. Pick up fish. Lay out fish/steel
50°	rods. RIH with bit and pick up all pipe. Cut core #96 (19').
	Run in to retrieve inner bbl. Could not latch. Reverse circ.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar/D.E. Sartan

DATE	WORK DESCRIPTION
May 12/71	to clear top of inner bbl. Retrieve inner bbl. Survey at
continued -	5 050'. Cut and retrieve core #97 (1') and #98 (20').
	Drilling wt. 1800#, RPM 130, Torque 2000 psi
	Mud wt. 9.1, WL 5.6, PV 6, YP 2, Vis. 38, Gels 0/0, % Oil 3,
	% Solids 3, Survey 7-3/4° at 5 050'.
May 13/71	Depth 5 178' Cored 74'
Clear	Retrieved core #99 (20'). Cored and retrieved core #100 (20'),
50°	#101 (14'), #102 (1'), #103 (5'), #104 (13'), #105 (7'). Coring
	#106.
	Drilling wt. 1500#, RPM 130, Pump Press. 175
	Mud wt. 9.1, Vis. 38, Deviation Survey 7-3/4 at 5 100'
May 14/71	Depth 5 205' Cored 27'
	Cored and retrieved core #106 (4'). Survey at 5 150'. Cored
Clear	and retrieved core #107 (2'). Weight indicator not functioning
60°	properly. Repaired load cell. Cored #108 (20'). Attempted to
	retrieve core 3 times, but inner tube would not latch. POH,
	checked core barrel and changed bits, RIH with bit #11D and
	started coring #109.
	Drilling wt. 1500#, RPM 130, Pump Press 175
	Mud wt. 9.0, Vis. 37, Deviation Survey 8° + at 5 150'
May 15/71	Depth 5 252' Cored 47'
	Cored and retrieved core #109 (6'), #110 (4'), #111 (5'), #112
Overcast	(6') and #113 (10'). Deviation survey at 5 200'. Cored and
35°/55°	retrieved #114 (10'). POH to add and respace centralizers.
	RIH with ten (10) centralizers spaced as follows: Two (2) 24'
	above core barrel, three (3) at 60' intervals, three (3) at
	120' intervals, one (1) at 180' interval and one (1) at 240'
	interval.
	Drilling wt. 1500#, RPM 130, Pump Press. 175
	Mud wt. 9.0, Vis. 37, Deviation survey 9-3/4° at 5 200'

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadioni LOCATION M-43A

ENGINEER D. E. Sartan

DATE	WORK DESCRIPTION
May 16/71	Depth 5 279' Cored 27'
	Cored and retrieved #115 (20'). Deviation survey at 5 250'.
Cloudy	Cored #116 (7') and twisted off at the pin of an aluminum
38°/56°	joint. RIH with wrong grappel on spear, failed to fish and
	POH. RIH and recovered fish at 3 882' and POH. RIH to add
	and respace centralizers.
	Drilling wt. 1200#, RPM 150, Pump Press. 150
	Mud wt. 9.1 ,W.L. 2.1, PV 8, pH 9, % Oil 2.5, Vis. 35, Gels 0/0
	YP 2, FC 1/32, % Solids 4
	Deviation survey 10-3/4° at 5 250'.
May 17/71	Depth 5 2 99' Cored 20'
	RIH with 19 centralizers spaced as follows: One (1) 12' above
	core barrel, one (1) at a 12' interval, one (1) at a 48' inter-
	val, eleven (11) at 120' intervals and five (5) at 60' intervals.
Rainy	Cored #117 (2') and twisted off from the pin of an aluminum
38°/52°	joint at 3 746'. POH. RIH with spear fished and retrieved core.
	RIH with 6 stabilizers spaced as follows: One (1) 12' above
	core barrel, one (1) at a 24' interval and four (4) at 60' in-
	tervals. Cored and retrieved #118 (15'). Started to core #119.
	Drilling wt. 1000/1500#, RPM 130/140, Pump Press. 125/150
	Mud wt. 9.1, WL 3.3, PV 6, pH 7, % Oil 0, Vis. 35, Gels 0/1,
	YP 1, FC 1/64, % Solids 3, ppm Cl, 42M, ppm Cr 500
May 18/71	Depth 5 347' Cored 48'
	Cored and retrieved #119 (11') and #120 (20'). Deviation sur-
Clear	vey at 5 297'. Cored and retrieved #121 (4'), #122 (8') and
40°/68°	#123 (4'). Deviation survey at 5 343'. Started coring #124.
	Drilling wt. 1500#, RPM 140, Pump Press. 100/120
	Mud wt. 9.2, W.L. 28, PV 12, pH 8, % Oil 2, Vis. 40, Gels 0/1
	YP 6, FC 1/32, % Solids 3, ppm Cl 38M, ppm Cr 1400
	Deviation surveys 11½° at 5 297' and 12° at 5 343'

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. E. Sartan /D.L. Tufts

DATE	WORK DESCRIPTION
May 19/71	Depth 5 370' Cored 23'
	Cored and retrieved #124 (20'), #125 (3') and #126 (4'). Failed
	to pull inner core barrel, had to POH. Checked BOP and had a
Clear	BOP safety drill. RIH, circulated and conditioned mud. Devia-
40°/70°	tion survey at 5 370' and stood by for instructions.
	Drilling wt. 1500#, RPM 140, Pump Press. 125
	Mud wt. 9.1, WL 2.6, PV 9, pH 9, % Oil 1, Vis. 37, Gels 0/1,
	YP 2, FC 1/32, % Solids 2, ppm Cl 30M, ppm Cr 1800.
	Deviation survey 11½° at 5 370'.
May 20/71	Depth 5 394' Cored 24'
	Cored and retrieved #127 (3') and #128 (3'). Failed to set
	inner core barrel. POH and changed diamond bits. RIH with
Clear	bit #12D. Deviation survey at 5 376'. Cored and retrieved
40°/75°	#129 (14') and #130 (3'). Deviation survey at 5 390'.
	Drilling wt. 1500#, RPM 140, Pump Press 150
	Mud wt. 9.1, WL 2, PV 12, pH 9, % Oil 2, Vis. 37, Gels 0/1,
	YP 6, FC 2/32, % Solids 2, ppm Cl 34M, ppm Cr 2000.
	Deviation surveys 11½° at 5 376', 11½° at 5 390'.
May 21/71	Depth 5 446' Cored 52'
	Cut cores #131,132,133. Cored @ average of 12 mins./ft.
40°/75°	Unable to cut full barrel due to fracturing resulting in
Clear	jammed core tube. Cut full 20' on core #134. Drilling in
	anhydrite. No jamming problems. Cut cores #135 - 138.
	Fractures resulted in short recoveries on these cores.
	Coring Wt. 1500#, RPM's 140, Mud wt. 9.0, Vis. 36-40.
May 22/71	Depth 5 465' Cored 19'
	Cored to 5 450'. Still coring @ 10-15 min. per ft. Lost
Cloudy	circulation. Lost approximately 40 bbls. of mud before
40°/70°	losses were noted by crew on shift and reported. Mixed mud
	to build volume. Mixed pill of lost circulation material,

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
May 22/71	(Fine/coarse walnut hulls and Fine/coarse Mica-Tex). Regained
continued	circulation and prepared to start coring. Worked on lost cir-
	culation for 5 hours. Experienced pump problems. Worked on
	pumps, circulated and cleaned to bottom for 2½ hours. Started
	coring again at 10-15 mins. per ft. Cored to 5 465'. Could
	not retrieve core. Had to trip out to pick up core. Started
	checking hole drift with wireline orienting instrument.
	Deviation @5 465' - 10°, Drilling wt. 1500#, RPM's 200
	Mud wt. 9.0, WL 2.0, PV 12, Oil 2%, pH 9.0, Vis. 37, FC 2/32,
	YP 4, Solids 4%.
May 23/71	Depth 5 517' Cored 52'
	Made 3 runs with a drift indicating instrument. Instrument
40°/65°	quite working on the 4th run.
Light rain.	Data: Depth / Deviation / Drift Direction
	5 465' / 10° / N 47° W
	5 294' / 9° / N 21° E
	5 124' / 9° / S 62° W
	Ran back in the hole with bit #12D. Still unable to cut 20'
	core due to jamming caused by fractures: - Cored into anhydrite
	and hard lime (core #147) cut full 20' core. Coring @ 12-15
	min. /ft. At report time #148 had cut 14'. Some light H_2S
	odor in newly broken core. No deflections in gas detector
	and no evidence of gas cutting in the mud. Some slight mud
	losses to the formation. Controlled again with Mica/Tex (fine).
	Drilling wt. 1500#, RPM 140, Pump 175 psi
	Mud wt. 9.0, WL 1.5, PV 10, Oil 3%, pH 9.0, Vis. 37, FC 2/32,
	YP 3, Solids 2%
May 24/71	Depth 5 582' Cored 65'
	Deviation stabilized @10½° range. Added 500# to bit wt. Dis-
	continued adding deisel fuel to the mud system. H & S plan to
	mix quick-trol with Kut-well. Coring time ranged from 10-15

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Wahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
May 24/71	mins/ft. Speeded up slightly with added string weight.
continued	Drilling in anhydrite with bands of highly fractured lime-
	stone - Drill string broke at ± 155'. Appeared to be clean
40-65°	fatigue break. Did not twist off. String torque was low
Rain	(1700) at time of break.
	Drilling wt. 2000, RPM's 140, Pump 260
	Mud wt. 9.0, WL 2, PV 8, pH 9.0, Oil 1%, Vis. 37, F.C. 2/32,
	YP 2, Solids 2%
May 25/71	Depth 5 591' Cored 9'
	Ran in the hole with a spear to retrieve broken drill string.
35-45°	Unable to latch into fish. Pulled out and picked up bent
Rain	single and ran back in with the spear. Latched into the fish
	and pulled out of the hole. Laid down broken and bent rods.
	Changed the position of the stabilizers and left only 3 in
	the string. Position of stabilizers 12 - 24 and 36 ft. above
	the top of the core barrel.
	Drilling wt. 2000#, RPM's 140, Pump 210 psi
	Mud wt 8.9, pH 7.5, PV 11, WL 4.0, Solids 4.0%, Vis. 39,
	FC 1/32, YP 3, Oil 1.0%
May 26/71	Depth 5 637' Cored 46'
	Still experiencing trouble with core jamming in tube and
35-55°	barrel, resulting in short core recoveries. Increased RPM's
Light Rain	from 140-200(+). Increased weight on bit to 2500#. The
	penetration rate improved slightly to 7-10 mins/ft. Mixed
	Quicktrol and Impermex to raise the viscosity. Core jammed
	in outer barrel. Could not pick up with tube. Tripping
	at report time to recover core.
	Drilling wt. 2500#, RPM's 200-220
	Mud wt. 8.9, WL 2, PV 27, pH 8.5, Solids 4%, Vis. 70-75,
	FC 1/32, YP 22, Oil 2%
	- 77 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
May 27/71	Depth 5 721' Cored 84'
35-65°	Increased viscosity appears to have improved drilling charac-
Clear	teristics. Vibrations have been dampened considerably allow-
	ing use of higher RPM's and more weight on the bit. Penetra-
	tion rate has increased to 5-7 min/ft.
	Drilling wt. 2500#, RPM's 200(+)
	Mud wt. 9.0, WL 0.5, PV 23, Oil 2%, pH 9.0, Vis. 65, FC 1/32,
	YP 9, Solids 5%
May 28/71	Depth 5 807' Cored 86'
	Coring progressing more satisfactorily. Penetration rate
45-75°	fairly consistant at 5-10 mins/ft. Experiencing considerable
Clear/Mild	blocking through highly fractured rubble zones. Some diffi-
	culty is being had in maintaining viscosities above 50 in
	the drilling fluid. There is no evidence of water intrusion
	and no chemicals are being added which would "cut" the mud.
	Baroid have been asked to look into the problem and suggest
	a remedy. The mud sump is full to capacity and as there is
	no place to dispose of excess it is planned to start recycl-
	ing the sump into the mud system. The sump has settled and
	the top 2' is essentially water, and should pose no problems
	as to compatibility with the system.
	Drilling wt. 2500#, RPM's 200 (+), Pump Press. 410#
	Rotary torque 1700
	Mud wt. 9.0, pH 7.5, Solids 6%, pV 27, Vis. 65, Oil 2%, YP 15
	Note: The charter standby helicopter is now on location.
	Flew core and two passengers to the airstrip on the McKenzie
	River. H & S have a labor crew at the McKenzie strip cleaning
	up barrels and junk left there last winter during move-in
	operations.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni **LOCATION** M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
May 29/71	Depth 5 858' Cored 51'
45-75°	Coring rate stabilized at ± 10 min/ft. Formation is pre-
Clear	dominantly anhydrite. The mud viscosity continues to break
	back during circulation. Can not maintain viscosity above
	50 secs. without adding large amounts of Quick-Trol. Mud
	stock getting low. No evidence of system volume increases.
	Checked all additives. No apparent reason for viscosity
	changes. Deviation increased from 10° to 12° between 5 765'
	to 5 827'. Tripped bit #14D and ran back in with new bit
	#15D. (50 series) Lowered RPM's and weight on bit to try
	to control deviations again.
	Drilling wt. 2000#, RPM's, 200 (+), Pump 450-275
	Mud wt. 9.0, PV 22, Oil % 4, pH 8.0, Vis. 48, YP 6, Solids % 5
	Unable to measure WL and FC due to broken filter press equip.
May 30/71	Depth 5 957' Cored 99'
	Coring rate improved slightly to 5-10 mins./ft. Formation
45-70°	badly fractured resulting in short core runs. Core recoveries
Cloudy	essentially rubble. Formation bedding angle has increased
	again to near vertical. Deviation survey at 5 887' was 12°.
	Having difficulty obtaining reliable Totco deviation records.
	Drilling mud properties stabilized somewhat with vis. holding
	in the 45 sec. range. Some indication that too much caustic
	is being added causing viscosity to drop.
	Drilling wt. 2000#, RPM's 200(+), Pump Press. 350
	Mud wt. 9.0, pH 8.0, Solids 5%, PV 15, Vis. 43, Oil %,
	YP 2
May 31/71	Depth 5 985' Cored 28'
	Coring at 9-12 min/ft. Lost short broken core in outer core
	barrel. Had to trip drill string to retrieve the core. Con-
	ducted drift survey while pipe was out of the hole. Results -

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

CHRONOLOGICAL HISTORY

WELL Caudex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION			
May 31/71	Depth	Deviation	Instrument Reading	Corrected Position
continued -	5 970'	12°	187°	S 30° E
	5 800'	10°	18°	N 19° W
	5 630'	10°	28°	N 9° W
	5 460'	12°	342°	N 55° W
	Ran back in the hole with Bit #15D to core. Drilling with			
	lower weight to try to control deviation.			
	Drilling wt. 2000#, RPM's 200(+), Pump 325 psi			
	Mud wt. 9.1, WL 3.0, PV 18, Oil 3%, Vis. 43, FC 1/32 Soft			
	YP 6, Solids 3%			
	Cores badly broken up. Formation fractured and bedding			
	planes dip up to 70°.			
June 1/71	Depth 6 071'		Cored 87'	
	With reduced weight on bit to try to control deviation, the			
50-75°	penetration dropped to 12-15 mins/ft. The formation is pre-			
	dominantly anhydrite again. Baroid mud engineer started			
	plot tests on mud system to determine cause of viscosity			
	drop off. Deviation survey at 6 018' was 12½°. Totco			
	not recording properly. Try leaving instrument on bottom			
	longer.			
	Mud wt. 9.0, PV 21, Oil 3%, FC 1/32 soft, Vis. 49, YP 9,			
	Solids 3%, pH 8.0			
	Drilling wt. 1500#, RPM's 200(+), Pump 340 psi			
June 2/71	Depth 6 103'		Cored 32'	
	Coring at 12-15 min./ft. Rate very low due to the reduced			
50-80°	drilling weight. The deviation continues to increase in			
Clear	spite of reduced rates and weights. Bit #15D was tripped			
	and a new bit run in to try to help control the drift. Rig			
	had trouble with hydraulic lines resulting in down time.			
	The formation being drilled is still highly fractured result-			
	ing in broken up cores which cause jamming in the barrel.			

BLAIN BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
June 2/71	More H_2S odor in broken cores but there has been no evidence
continued -	of gas on the Baroid gas detector or entrained in the drill-
	ing fluid.
	Drilling wt. 1500#, RPM's 200, Pump 380 psi
	Mud wt. 9.1, WL 4.0, PV 18, pH 8.0, Oil 3%, Vis. 52, FC 1/32,
	YP 6, Solids 3%.
June 3/71	Depth 6 157' Cored 54'
50-75°	Coring progress still very slow due to the low bit weight
	being carried. Hole deviation still increasing. Last survey
	at 6 135' = 15°. Coring at 15-25 min/ft. Maintaining vis-
	cosity in the 50 sec. range to help control vibration problem
	in rods. It has been ascertained that Quick-Trol is shear
	degradeable and will not hold viscosities in the higher ranges
	at the RPM rates being carried. Ordered XC Polymer for ship-
	ment from Edmonton. System will be changed to Polymer as soon
	as possible. Use of this polymer will not require the dumping
	of the present system.
	Drilling wt. 12-1500#, RPM's 200, Pump 370-400 psi. Mud wt. 9.1,
	Vis. 51
June 4/71	Depth 6 234' Cored 77'
	Deviation still increasing. Reached the limit of the 16°
45-65°	clock. A higher limit Totco has been ordered but has not yet
overcast	arrived. Increased pump pressure and throughput for better
	bottom cleaning. Penetration rate increased from 20-30 min./ft
	to 7-10 min/ft with no increase in Bit weight or RPM's. The
	hole continues to drift in spite of reduced bit weights. A
	shipment of KELZAN AL Polymer arrived via air freight. This
	system will be used to maintain higher viscosities starting
	immediately.
	Drilling wt. 12-1500#, RPM's 200, Pump 400 psi.
	Mud wt. 9.1, Oil 2%, PV 14, pH 7.0, Vis. 51, Solids 6%, YP 12

BLAIN, BINNE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts/L. J. Kasnar

DATE	WORK DESCRIPTION
June 5/71	Depth 6 294' Cored 60'
	Continued to vary drilling parameters in an effort to achieve
45-60°	conditions which would reduce or minimize hole drift. Hole
overcast	angle has increased to 18°. (approximately 1°/day this week).
	Started using Totco 24° clock today. Reduced weight on bit
	to 1000# which seems to be as low as it can go and maintain
	any effective penetration. Increased RPM's from 200 to 230
	and pump pressure to 450.
	Started mixing Kelzan Al Polymer in place of Quick-Trol to
	try to maintain viscosity in higher ranges (48-55).
	Drilling wt. 1000#, RPM's 200-230, Pump. 430-450
	Mud wt. 9.1, PV 27, Oil 2%, pH 8.0, Vis. 49-52, YP 11, Solids 6%,
	FC 1/32, WL 2.0
June 6/71	Depth 6 318' Cored 24'
	Inner core barrel jammed with blocked core. Tripped drill
40-65°	string to recover core. Changed bits. Ran in with new 10
Clear	series bit #17D. Shut down for rig repairs (hydraulic hoses)
Light winds	for approximately 7 hours. Formation very highly fractured
	resulting in short core recoveries again. Drilling weight
	being held low at 1000-1200#, RPM's 230, Pump press. 430 psi.
	Deviation at 6 310' was 18°
	Mud wt. 9.7, WL 2, PV 21, pH 9.0, Oil 5% ,Vis. 51, FC 1/32,
	YP 16, Solids 8%
June 7/71	Depth 6 393' Cored 75'
	Cored at 7-10 mins/ft. Penetration rate improved in spite of
50-65°	low drilling weights. Formation mostly soft (sucrosic) anhy-
Clear	drite. Formation bedding angle very high (70°) again. De-
	viation increased to 18½° at 6 355'. Lost core #205 from
	inner barrel. Tripped to retrieve core. No core in barrel.
	Ran back in to ream core (17'). Drilling wt. 1000-1200#,
	RPM's 230, Pump 430 psi.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION N-43A

ENGINEER L. J. KASMAR

DATE	WORK DESCRIPTION
June 7/71	Mud wt. 9.1, pH 8.5, PV 22, Oil 5%, Vis. 50, YP 14, Solids 8%
continued	
June 8/71	Depth 6 413' Cored 20'
	Attempt to run over core. Made four wireline trips to re-
Clear	cover core. Survey at 6391'-19°. Circ. inner bbl. to bottom
	seat. Requires approximately 1/2 hour at this depth. Drill
	to 6 405' and recover core. Pent. 5/6 ft/hr. Core not in
	tube. Trip to recover core in outer bbl. Bit No. 17D, 4¾ -
	10 series, drilled 109' in 21-3/4 hours. Change bits. RIH
	with bit No. 18D - 4¾, 10 series. Circ. to bottom. Require
	1/2 hour. Drill.
	Drilling wt. 1000#, RPM 240, Torque 1800 psi, Mud wt. 9.2,
	Vis. 54.
June 9/71	Depth 6 467' Cored 54'
	Drill to 6 425' and recover core. Survey at 6 418' - 17°.
	Cont. core and recover cores. Inner bbl. hanging up on trip
	in and requires to be chased with wireline. Survey at 6 460'
	18°. GM Prime Movers having invector trouble. 1½ hour in
	repair. Coring 3/5' Hr.
	Drilling wt. 1000, RPM 240, Torque 1800 (psi)
	Mud wt. 9.2, Vis. 52
June 10/71	Depth 6 504' Cored 37'
	Drilled to 6 484' and recover core. Drop inner bbl. Not
60°	seated. Retrieve bbl. with wireline and drop alternate bbl.
Light	Drill. Survey at 6 500' - 19°. POH to change bits. Piece
showers	of metal on bottom had fouled bit. Metal, apparently from
	dog collar, dropped previously and hung up somewhere. Re-
	cover metal piece with core in core tube. Bit No. 18D, 4¾,
	10 series, 99' in 28 hours. RIH with bit No.19D, 4¾, 10
	series. Circ. to bottom.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
June 10/71	Drill wt. 1000 #, RPM 240, Torque 1700 (psi)
continued	Mud wt. 9.2, WL 1.6, Gels 3/4, PV 20, YP 20, Vis. 50, pH 9
	Solids 8%, Oil 4%
June 11/71	Depth 6 556' Cored 52'
Overcast	Drill to 6 515' and recover core. Chase inner bbl. to bottom.
Rain last	Pull and reseat. Cont. core. Survey at 6 550' - 18°. Lost
24 hours	2-3/4 hours working on injectors on GM and cleaning out valves
	in pump. Core 3/4' per hour. Drill wt. 12/1500#, RPM 240,
	Torque 1800 psi
	Mud wt. 9.3, WL 2.2, Gels 2/4, PV 18, YP 20, Vis. 56, pH 9,
	Solids 11%, Oil 3%
June 12/71	Depth 6 576' Cored 20'
Overcast	Pump valves fouled. Drill to 6 576' and recover core. POH.
	Eastman ran directional survey-surface to TD. Magnetic
	survey instrument on drill rods from casing shoe to TD and
	Gyro instrument on Wireline from surface to casing shoe.
	Checks with Totco readings and indicates a constant direction
	of deviation to the N.E.
June 13/71	Depth 6 633' Cored 57'
	Pick up core bbl. with bit No. 19D. Repairs to injectors
	and replacement of hose on power swivel required 3-3/4 hours.
	Drill and recover cores. Survey at 6 609' - 19°. Cont. rate
	5/7' per hour.
	Drill wt. 1500#, RPM 240, Torque 1800 psi.
	Mud wt. 9.3, WL 2.8, Gels 2/4, PV 18, YP 20, Vis. 55, pH 9,
	Solids 9%, Oil 2%, FC 1/32, Chromates 700

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
June 14/71	Depth 6 674' Cored 41'
	Drill to 6 646' and recover cores. Pent. rate increased to
60°	10 ft/hr. with no weight increase on Martin Decker Weight
Clear	Indicator. Note weight increase on geolograph. Suspect
	Martin Decker not working properly. Circ. inner bbl. to
	btm. and drill to 6 650'. Repair to weight indicator, re-
	move and replace diaphram in load cell (2½ hr), drill to
	6 664' and recover core. Clean out pump valves. Drop Totco
	in inner bbl. for survey. Adaptor on inner bbl. came out on
	Wireline and left remainder in hole. POH and retrieve inner
	bbl. RIH. Drill to 6 674' and recover core. Drill wt.
	1000#, RPM 230, Torque (psi) 1800
	Mud wt. 9.2, Vis. 55, Survey 20° at 6 665'
June 15/71	Depth 6 728' Cored 54'
	Drill to 6 677'. Repair wt. indicator. Pump up with hydraulic
	fluid. Replace main winch hydraulic motor (2 hrs). Drill to
	6 728. Run in for core with Wireline. Back off in overshot
	assembly. POH. Recover overshot, inner bbl. Check BOP and
	change bits. Bit No. 19D, 4¾" S-10. 224' in 40½ hours.
	RIH with Bit No. 20D, 4¾ S-10. Change solenoid on hydraulic
	pump (1 hr). Drill wt. 1000/1500#, RPM 230, Torque (psi) 1800
	Mud wt. 9.2, WL 2.4, Gels 1/2, % Solids 7, PV 27, Vis. 47,
	YP 12, pH 8, % Oil 3, Chromates 900 ppm
June 16/71	Depth 6 807' Cored 79'
	Repair hydraulic and work on injector in CM while RIH. (Repair
	time 5½ hours) Survey at 6 728'. Drop inner bbl. and circ.
	to btm. Drill and recover core to 6 804'. Survey at 6 794'.
	Drill wt. 1000/1500#, RPM 220, Torque (psi) 1800
	Mud wt. 9.2, WL 2.4, Gels 2/2, % Solids 7, Vis 48, PV 15, YP 15,
	pH 9, % Oil 3, Chromates 1200 ppm
	Survey: 20° at 6 728', 19½° at 6 794'

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
June 17/71	Depth 6 916' Cored 106'
	Drill and recover core to 6 869'. Survey at 6 860'. Drill
65°	and recover core to 6 916'. Electrical repair (5¼ hrs.)
Clear	Pent. rate 9 ft/hr. Drill wt. 1500#, RPM 220, Torque (psi) 1800
	Mud wt. 9.2, Vis. 48, Survey: 20½° at 6 860'
June 18/71	Depth 6 996' Cored 80'
	Drill to 6 929' and recover core. Drop Totco in inner bbl.
	for survey. Inner bbl. stuck. Work Wireline mechanical jars.
	Clamp Wireline to blocks. Pull Wireline apart at surface.
	Pull full with Wireline winch and 14,000# on blocks. Pull up
	4 stands and retrieve Wireline. Inner Bbl. free. Pull out
	Wireline. Drill while respool winch with 15 000' of Wireline.
	Found spring in latching assembly broken. Probably jammed
	and came free after jar caused by line parting. Continued
	drilling and recover core. Survey at 6 980'.
	Drill wt. 1500#, RPM 220, Torque (psi) 1800
	Mud wt. 9.3, WL 2.4, Gels 1/2, % Solids 6, Vis. 49, PV 14,
	YP 15, pH 8, % Oil 5, Survey: 20½° at 6 925', 20½° at 6 980'
June 19/71	Depth 7 101' Cored 105'
	Drill and recover core. Repair Wireline hydraulic pump.
	(1½ hrs). Survey at 7 040'. Pent. rate 6-8 ft/hr.
	Drill wt. 1500#, RPM 200, Torque (psi) 1900
	Mud wt. 9.3, Vis. 49, Survey: 20½° at 7 040'
June 20/71	Depth 7 143' Cored 42'
	Drill to 7 108' and recover core. Foul Wireline in top sheave
70°	while recovering core. Lay out 5 000'. Drill and recover core.
Showers	Survey at 7 122'. POH with dull bit. Bit No. 20D, 4½ S-10.
	401' in 48 hours. Pick up new core barrel assembly. RIH with
	Bit No. 21D, 4½ S-25. Check power swivel drill. Repair in-
	jectors on CMC. (Water in fuel fouling injectors)

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar/ D. L. Tufts

DATE	WORK DESCRIPTION
June 20/71	Drill wt. 1500#, RPM 200, Torque (psi) 1909
continued -	Mud wt. 9.3, WL 3.8, Gels 1/7, % Solids 8, Vis. 50, PV 14,
	YP 14, pH 8.5, % Oil 4, Chromates 1000 ppm.
	Survey: 22½° at 7 122'
June 21/71	Depth 7 244' Cored 101 ft.
	Cored to 7 244' with no problems at a rate varying between
70°	7-12 mins/ft. Surveyed at 7 180'. Deviation 22½°. Reduced
Overcast	drilling weight to 1000. RPM's 200, Pump 450 psi
	Mud wt. 9.4, pH 8.5, Vis. 50
June 22/71	Depth 7 337' Cored 93'
	Coring fairly evenly. Formation highly fractured. Some good
75°	to fair fracture porosity at 7 290'. Approximately 10' of
Clear	faster drilling 4-7 mins. per ft. Mud weight still ranging
	too high (9.4). Started mixing new system using fresh water
	instead of sump water to help cut solids. Clean out desilter
	and shaker tanks. Drilling wt. 1000-1500#, RPM's 200 +,
	Pump 450 psi. Deviation 23½° at 7 265'.
	Mud wt. 9.3, FC 1/32, PV 14, Oil 3%, Chromates 1600 ppm
	Vis. 51, pH 8.5, YP 14, Solids 7%
June 23/71	Depth 7 387' Cored 50'
	Deviation increasing again. Reduced weight to help control
80° Clear	drift. Increased RPM's and pump rate. Surveys: 7 340' - 24°,
	7 380' - 25½°. Received 90° Totco instrument today. Completed
	dumping and rebuilding mud system.
	Mud wt. 9.2, pH 8.0, PV 13, FC 1/32, Oil 4%, Vis. 50, WL 3.0,
	YP 12, Solids 4%
	Drilling wt. 1000-1250#, RPM's 200-225, Pump 425
	Fuel supply estimated at less than 5 weeks.
	- 87 -

BLAIN, MOORE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
June 24/71	Depth 7 439' Cored 52'
	Finished tripping bit #21D. Ran back in the hole with bit
Overcast	#22D - 10 series. Carried 1000-1250# on bit. Rotated @200+
Rain	RPM's. Varied pump pressure from 425-450 psi. Drilling
+50°	mostly anhydrite. Bedding 0-30° off vertical plane of the
	core. Kelzan stock depleted. Switching back to Quick-Trol
	for viscosity control.
	Mud wt. 9.1, Gels 8/12, FV 12, Oil 4%, FC 1/32, Vis. 50, pH 8.0
	YP 13, Solids 4%
June 25/71	Depth 7 490' Cored 51'
	Penetration dropped to 15-25 mins/ft primarily due to low
Overcast	drilling weight. Bedding near vertical. Still drilling in an-
+65°	hydrite. Deviation has stabilized somewhat with lower weight.
	Surveys: 7 438' - 26°, 7 471' - 25½°. Shut down to repair
	swivel packing again.
	Mud weight 9.1, pH 8.0, FC 2/32, FV 15, Oil 4%, Vis. 50,
	WL 4.0, YP 21, Solids 6%
June 26/71	Depth 7 559' Cored 69'
	Lithology unchanged. Bedding still near vertical. Deviation
+65°	holding @26° at 7 518'. Experiencing considerable trouble
Overcast	with Quintuplex pumps. Down 3/4 hour for pump repairs.
	Solids building up again. This desilter is not adequate for
	this type of drilling.
	Mud wt. 9.3, FV 19, Solids 7%, pH 9.0, Vis. 54, YP 27, Oil 3%
	WL 4.0
June 27/71	Depth 7 633' Cored 74'
	Drilling more dolomite. Penetration rate improved slightly.
60°	Formation bedding flattened to approximately 45°. Deviation
Partly	holding in the 26° range. Lost approximately 30(+) bbls. of
cloudy.	mud at 7 575'. The loss was noted while pulling a core.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
June 27/71	Not certain that the loss was into the formation. No further
continued	losses since that point. Considerable problem being experienced
	with pumps. No spare engines, or spare parts. Materials ordered
	but have not arrived. The entire system of pumps and manifolds
	needs to be shut down and overhauled or replaced. This equip-
	ment is not reliable enough to handle emergencies or high de-
	mands.
	Drilling wt. 1000#, RPM's 220, Pump 450 psi
	Mud wt. 9.3, WL 3.4, PV 16, pH 9.0, Solids 7%, Vis. 50,
	Vis. 50, FC 1/32, YP 19, Oil 4%
June 28/71	Depth 7 699' Cored 66'
	Deviation still holding in 26° range. Lithology unchanged.
56°	Anhydrite and dolomite. No further fluid losses. Maintaining
Cloudy	viscosity in 47-49 sec. range using QuickTrol. Desilter still
Windy	not handling solids adequately. New drill collar has not yet
	arrived from Edmonton.
	Drilling wt. 1000# , RPM's 225, Pump 425 psi
	Mud wt. 9.3, W.L. PV 18, pH 9.0, Solids 7%, Vis. 49, FC 1/32,
	YP 16, Oil 2%
	Started hauling steel drill pipe from river with chopper.
June 29/71	Depth 7 763' Cored 64'
	Drilling rate decreasing slightly. Drilling predominantly
+50°	anhydrite. Deviation out to 27° at 7 731'. Running short on
Overcast	some mud stocks. Ordered new supplies shipped in. Ran out of,
Rain	Caustic, Bichromate, Kelzan and preservative. Presently trying
	to maintain viscosity with QuickTrol. Will not hold viscosity
	over 47.
	Drilling wt. 1000#, RPM's 200, Pump Press. 425 psi
	Mud wt. 9.3, WL 3.0, PV 17, pH 9.0, Solids 7%, Vis. 49, FC 1/32,
	YP 16, Oil 3%.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
June 30/71	Depth 7 789' Cored 26'
	Tripped out with bit #22D. Serviced core bbl. Changed oil
+50°	in rig engines and pump engines. Picked up new 4" OD spiral
Overcast	drill collar. Placed in string above core bbl. Tool sequence -
Rain	bit, core bbl., spiral D.C. HWQ rod, stabilizer, balance of
	drill string. The stabilizer is 62' off bottom. No trouble
	experienced running in the hole with the D.C. Bit #23D is 10-
	series.
	Drilling wt. 1000#, RPM's 240, Pump Press 450 psi
	Mud wt. 9.3, pH 9.0, FC 1/32, Vis. 48, WL 3.2
July 1/71	Depth 7 873' Cored 84'
	Started increasing drilling weight slightly to establish the
+55°	effect of the drill collar and stabilizer. Deviation stabilized
Overcast	noteably over last 80'. Penetration varying between 7 and 20
Showers	mins/ft. Deviation @ 7 805' - 27°, @ 7 836' - 26½°
	Drilling wt. 1000 - 1250#, RPM's 220-240, Pump Press. 450 psi
	Mud wt. 9.3, PV 16, pH 9.0, FC 1/32, Solids 6%, Vis. 47,
	YP 10, WL 4.0, Oil 4%
	Completed hauling 1000' of 3½" HWQ rods from the McKenzie River
	to this location. Still short approximately 3000' of drill rod
	to be able to drill to 12 000'. Diesel fuel, chopper fuel, new
	diesel engines and additional mud supplies confirmed to arrive
	at Dahadinni River by N.T. barge on July 6.
July 2/71	Depth 7 961' Cored 88'
	Drilling rate stabilized at 10-12 mins/ft. Deviation holding
+55°	in 26° range. Increased drilling weight to 1500#, RPM's 230,
Overcast	Pump Press. 400 psi.
	Mud wt. 9.3, WL 3.8, pH 9.0, Vis. 47, FC 1/32
	Mud properties holding satisfactorily.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 3/71	Depth 8 021' Cored 60'
	Drilling rate fairly stable at 12 min/ft. Deviation increase
+60°F	of 1/2° from 7 979' to 8 018' (to 26½°). Held drilling weight
Clear	at 1500 psi, decreased RPM to 180 due to increasing torque
	with occasional chatter. Pump pressure 400 psi. Power swivel
	broke down 4:00 a.m. July 3. Worked on swivel. Started out
	of hole to change bits while waiting on replacement swivel.
	Mud wt. 9.2, WL 3.4, pH 9.0, Vis. 47, F.C. 1/32
July 4/71	Depth 8 021' No Progress
	Finished tripping for bit (cleaned settling tank while out of
+55°F	hole). Circulated, waiting on swivel. Began installing re-
Overcast	placement swivel. Ran desilter while circulating - mud in good
	condition.
	Mud wt. 9.2, WL 2.6, pH 8.5, Vis. 47, Gels 2/4, PV 10, YP 17,
	Solids 7%, Oil 3%, FC 1/32, Chromate 900 ppm, Cl^- 13 000, Ca^{++} 800
	Note: (1) 2 men built wharf at Cloverleaf Lake for off-loading
	float aircraft.
	(2) 3 men travelled to H.S. rig #9 to pick up replacement
	swivel. Men and swivel back on location 7:45 a.m.
July 5/71	Depth 8 081' Cored 60'
	Finished installing replacement swivel. Cored ahead to 8 081'.
+55°F	Found latch case pin broken when attempting to retrieve inner
Overcast	tube and core from 8 081'. Began tripping tools to recover core.
	Deviation 26°. Drilling rate varying 12-8 min/ft. (last 20 ft.
	avg. 8 min/ft). Drilling wt. 1500, RPM 240, Pump Press. 375
	Mud properties holding satisfactorily.
	Mud wt. 9.2, WL 2.9, pH 9.0, Visc. 49
	- 91 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 6/71	Depth @ 121' Cored 40'
	Finished tripping out. Recovered core. Laid down 80 aluminum
+55°F	rods and picked up 80 steel rods. Cored ahead at approximately
Clear	11 min/ft. Drilling wt. 15-0, RPM 200, Pump Press. 375
	Deviation holding at 26°F. Mud properties holding satisfactorily.
	Wt. 9.2, WL 2.1, pH 8.5, Vis. 47, Gels 2/4, PV 11, YP 28
	Solids 6%, Oil 4%, FC 1/32, Chromate 900 ppm, Cl^- 12 000 ppm
	Ca^{++} 1200 ppm
	Rods in hole: 180 steel, 495 aluminum
	Barge arrived at river strip and off-loaded following
	200 drums diesel, 30 drums Av. gas, 10 drums Kutwell
	40 sx Sodium Bichromate, 6 sx caustic, 20 sx Kelzan Al
	7 sx Preservative, Misc. small supplies.
	Lease helicopter transferred mud to location.
July 7/71	Depth @ 208' Cored 87'
	Cored ahead at 8-13 min/ft. (Stringered Dolomite and Anhydrite).
+60°F	Weight 1500, RPM 200
Clear	Surveys @ 8 150' and 8 170' misruns. Deviation increased to
	27°- at 8 190'. Decreased drilling weight to 1200#.
	Mud properties satisfactory.
	Wt. 9.2, WL 2.5, pH 8.5, Vis. 47, Gels. 3/5, PV 10, YP 32,
	Solids 7, Oil 5, FC 1/32 Chromate 800, Cl^- 13 000, Ca^{++} 200?
July 8/71	Depth @ 275' Cored 67'
	Cored ahead at 8-16 min/ft. Wt. 1500, RPM 210, PP 425-400
+54°F	Surveys @ 230 - 24½, 8243 - 25. Increased wt. to 1500
Overcast	Were attempting to latch onto core tube at 8:00 a.m. Will
	probably have to trip rods. Went through blow-out procedures
	with all crews. Mud properties holding satisfactorily.
	Wt. 9.2+, Vis. 48, pH 9
	- 92 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 9/71	Depth 8 275' No Progress.
	Were unable to latch core tube with Wireline overshot. Hoisted
+60°F	drilling string. Found that pin of second stabilizer above
Clear	core barrel had broken, leaving in hole, from bottom:
	Bit, core barrel, receiver sub and stabilizer sub. Waited
	on orders. Ran in with open-end rod string to just over fish.
	Circulated over fish. Mud properties satisfactory.
	Wt. 9.3, WL 3.3, pH 8.5, Vis. 47, Gels 3/6, PV 9, YP 29,
	Solids 6, Oil 4, FC 1/32, Chromate 700, CL^- 12 500, Ca^{++} 80 ?
July 10/71	Depth 8 290' Cored 15'
	Circulated and rotated into fish. Circulated through fish.
+50°F	Pulled up, broke off core. Set back on bottom. Ran in with
Clear	Wireline overshot inside rods. Latched core tube and recovered
	core. Hoisted drilling string. Recovered core barrel. (Pin
	of open-end drill rods had wedged into broken pin in top of
	core barrel stabilizer - found core barrel undamaged). Ran in
	with new bit and cored ahead. Made 3 foot and 6 foot run -
	core jamming due to vertical fractures. Some scattered porosity.
	Mud properties satisfactory.
	Wt. 9.3, WL 3.1, pH 8.5, Vis. 52, Gels 5/11, PV 10, YP 34,
	Solids 6, Oil 5, FC 1/32, Chromate 500, CL^- 12 000, Ca^{++} 60?
	Note: Stopped drilling 5:00 a.m. July 8/71.
	Started drilling 1:30 a.m. July 10/71.
	Total time lost 44½ hours (includes recovering core
	8255-75 and bit trip).
July 11/71	Depth 8368' Cored 78'
	Cored ahead at 10-13 min/ft. Changed weight on bit to 2000
	after survey at 8 293' (RPM 200, PP 500).
	Surveys 8 293 - 24°, 8 325 - 24°.
	Formation back to dense Anhydrite/Dolomite (bedding planes in core

BLAIN, BIGGE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 11/71	± 45°). Generally coring 20 ft/run. Mud properties holding
continued	satisfactorily - possibly losing some 10 Bbl/Day.
	Wt. 9.2, WL 3.6, pH 9.0, Vis. 48, Gels 4/6, PV 8, YP 29
	Solids 7, Oil 3, FC 1/32, Chromate 600, CL^- 10 000, Ca^{++} 60?
	Note: Hardness readings since July 7 in serious doubt. Have
	ordered new test solutions.
July 12/71	Depth 8 449' Cored 81'
	Cored ahead at 10-12 min/ft. Deviation took 2½° drop at
	8 385', then stabilized. (Wt. 2000, RPM 210, PP 450)
+45°F	Surveys: 8 385 - 21½° (Top stabilizer on tube spun off)
Overcast	8 397 - 22° 8 440 - 21½°
	Formation basically unchanged last 24 hours (alternating Dol/Anhy)
	Mud properties holding satisfactorily - hole still weeping
	slightly.
	Wt. 9.2, WL 3.4, pH 9.0, Vis. 46, Gels 3/7, PV 8, YP 30, Solids 5,
	Oil 4, FC 1/32, Chromate 500, CL^- 10 000?, Ca^{++} 80?
July 13/71	Depth 8 579' Cored 50'
	Cored ahead at 10-13 min/ft. to 8 522' recovering full 20' runs.
	Cored to 8 527' - core jammed. Recovered core, cored to 8 529' -
	core jammed. No core in inner barrel for interval 8 527'-8 529'.
+45°F	Began hoisting rods - assume jammed core in outer barrel.
Overcast	Formation basically unchanged last 24 hours but interval 8 522'-27
Intermittant	prdominantly Dolomite + badly broken.
Rain	Deviation stabilized (8 480 - 21-3/4°).
	Drilling Properties: Wt. on bit 2000, RPM 200, PP 450, Torque 2200-2300
	Mud Properties holding satisfactorily but formation weeping.
	No mud dumped during last 7 days.
	Mud: Wt. 9.3, W.L. 3.8, pH 8.5, Visc. 45, Gels 3/5, PV 7, YP 25,
	Solids 5, Oil 4, F.C. 1/32, Chromate 600, CL^- 9000, Ca^{++} 60?,

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 14/71	Depth 8 579' Cored 50'
	Finished trip out. Recovered 3 inches core jammed in barrel.
	Installed reaming stabiliger midway in core barrel. Ran in
+50°F	with new bit. Cored ahead at 8-12 min/ft. Wt. on bit 2000, RPM 210,
Overcast	PP 450, Torque 2300.
Intermittent	Formation: Unbroken Dolomite/Anhydrite w/trace porosity.
Rain	Deviation dropping slightly (8 545 - 21°).
	Mud Properties holding satisfactorily - hole still weeping at approx.
	10-15 bbl/day.
	Mud Wt. 9.2+, W.L. 4.4, pH 9.0, Visc. 44, Gels 3/6, PV 7, YP 25,
	Solids 6, Oil 3, F.C. 1/32, Chromate 700, Cl^- 9000, Ca^{++} 60?
July 15/71	Depth 8 662' Cored 83'
	Cored ahead at 10-13 min/ft. Wt. on bit 2000, RPM 210, PP 425,
	Torque 2300.
+50°F	Formation unbroken Dolomite/Anhydrite. No porosity. Apparent
Raining	dip changed from 45° to 5° below interval 8 559'- 8 579'.
	Deviation dropping slightly (8 608'-20-1/2°).
	Mud Properties holding satisfactorily.
	Mud Wt. 9.2, W.L. 4.8, pH 9.0, Visc. 47, Gels 4/9, PV 7, YP 31,
	Solids 6, Oil 3 F.C. 1/32, Chromate 500, Cl^- 8500, Ca^{++} 60?, Pf 0,
July 16/71	Depth 8 724' Cored 62'
	Cored ahead at 11-20 min/ft. Wt. on bit 2000, RPM 190/200, PP 425,
	Torque 2300. Vibration in hole - core "rippled" badly on surface.
	Short runs (6) and slow penetration.
	Formation 70/30 Anhydrite/Dolomite with apparent dip of 5°. Massive -
+45°F	only occasionally broken.
Raining	Deviation dropping slightly (8 668' - 20°).
	Raised viscosity to dampen vibration - weight climbing. Still losing
	15 bbl/day.
	Mud Wt. 9.3, W.L. 4.3, pH 9.5, Visc. 50, Gels 5/9, PV 8, YP 34,
	Solids 6-1/2, Oil 3-1/2, F.C. 1/32, Chromate 400, Cl^- 8500, Ca^{++} 60?, Pf 0.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Gandex et al Dahadinni **LOCATION** M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 17/71	Depth 8 762' Cored 38'
	Cored ahead at 10-20 min/ft. Wt. on bit 2000-3000. RPM 200. PP 425.
	Torque 2300. Vibration at bit - core "rippled" badly. Short runs
	(6) and slow penetration. Core not "feeding" properly. Began
	hoisting.
	Formation Anhydrite/Dolomite with apparent dip 5°. Occasionally
	badly broken in Dolomite phase.
	Deviation dropped abruptly by 2° in 65' (8 733' - 18°).
+50°F	Mud Properties holding satisfactorily.
Clear &	Mud Wt. 9.3+, W.L. 4.3, pH 9.0, Visc. 47, Gels 3/6, PV 6, YP 25,
Calm	Sol'ds 6, Oil 5, F.C. 1/32, Chromate 900, Cl^- 7500, Ca^{++} 707, Pf 0.
July 18/71	Depth 8 787' Cored 25'
	Finished hoisting. Examined core barrel and bit. Found core barrel
	badly bent, bit flat on face. Installed new core barrel. Ran in
+50°F	hole, had trouble starting core - cored 20'. Made two very short runs
Clear &	(8" + 4"). Found bent inner barrel. Changed inner barrel, cored
Calm	ahead (penetration rate 10-13 min/ft.). Wt. on bit 2000, RPM 200,
	PP 450, Torque 2300.
	Formation 60/40 Anhydrite/Dolomite with apparent dip 5°. Occasionally
	badly broken in Dolomite phase.
	Deviation increased abruptly by 2° in 47' (8 780' - 20°). Survey
	at 8 733' possibly in error due to bent core barrel.
	Mud Properties holding satisfactorily.
	Mud Wt. 9.2+, W.L. 5.2, pH 8.5, Visc. 55, Gels 6/8, PV 8, YP 37,
	Solids 6-1/2, Oil 4-1/2, F.C. 1/32, Chromate 700, Cl^- 7500, Ca^{++} 607,
	Pf 0.
July 19/71	Depth 8 865' Cored 78'
	Cored ahead at 9-12 min/ft. coring 70' runs.
	Formation 50/50 Anhydrite Dolomite with Tr. shale. Apparent dip 5°.
+52°F	Drilling Properties: Wt. on bit 2000, RPM 200/230, PP 450, Torque 2300
Overcast	Deviation holding: 8 798' - 20°, 8 843' - 19-1/2°.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER R. L. Hansen

DATE	WORK DESCRIPTION
July 19/71	Mud Properties holding satisfactorily.
Continued	Mud Wt. 9.3, W.L. 5.2, pH 9.0, Visc. 46, Gels 3/7, PV 7, YP 28.
July 20/71	Depth 8 952' Cored 87'
	Cored ahead at 13-8 min/ft. (20' runs). Wt. on bit 2000, RPM 200/230,
	PP 430-500, Torque 2400.
	Formation 55/45 Anhydrite/Arg. Dolomite with Tr.shale. Apparent
	dip 5°.
	Deviation holding: 8 903' - 20°, 8 943 - 19-1/2°.
+56°F	Mud Properties holding satisfactorily.
Overcast	Mud Wt. 9.3, W.L. 5.1, pH 9.0, Visc. 46, Gels 3/7, PV 6, YP 32,
	Solids 6, Oil 4, F.C. 1/32, Chromate 700, Cl^- 6500, Ca^{++} 60?, Pf 0.
	Still losing 10-15 bbl/day.
July 21/71	Depth 9 041' Cored 89'
	Cored ahead at 15-7 min/ft. Made two short runs (core jamming),
	remainder 20' runs. Wt. on bit 2000, RPM 230, PP 450, Torque 2400-2500
	Formation 70/30 Dolomite/Anhydrite. Dolomite Breccia Zone 9 019'-9 027
+50°F	Dip uncertain.
Cloudy	Deviation holding: 9 001' - 20° (punched twice @ 20° + 22°).
	Mud properties holding satisfactorily.
	Mud Wt. 9.4, W.L. 5.8, pH 8.5, Visc. 48, Gels 5/6, PV 7, YP 33,
	Solids 8 Oil 4, F.C. 1/32, Chromate 800, Cl^- 6500, Ca^{++} 60, Pf 0.
	NOTE: Checked Ca^{++} with new reagents - still 60 ppm.
July 22/71	Depth 9 061' Cored 20'
	Cored to 9 061' (20') @ 10-12 min/ft. Retrieved the core and ran
	in w/Totco. Deviation 18° @ 9 060 (dropped 2° in 60'). Circulated
+65°F	off bottom while shut down for rig modifications. Completed
Overcast	installation of new monkey board and rod rack. (Repair time 7-1/2 hrs.
Showers	Returned to bottom and started to rotate. The blower on the main
	rig power source (GM-engine) broke down. As no spare parts are
	available the rig was shut down waiting on repairs to be shipped

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. Tufts

DATE	WORK DESCRIPTION
July 22/71	from Calgary. Shut down time today, 10 hrs.
Continued	The 20' core was cut with 2000# on the bit @ 175-200 RPMs. Pump
	press. 475#.
	Mud Wt. 9.4, Visc. 45.
July 23/71	Depth 9 061' Cored 0'
50°	Circulated off bottom waiting on parts for GM engines. Unable to get
Overcast	spare parts into Norman Wells due to rain and fog.
Rain	Cleaned mud tanks, serviced desilter.
	Mud Wt. 9.3, Visc. +3.
July 24/71	Depth 9 097' Cored 36'
	Received repairs for GM's. Completed repairs and started drilling
+65°	again @ 5p.m. July 23. Core badly fractured resulting in blocking and
Clear/Mild	short recoveries. Solids and mud weight continuing to increase.
	Will have to dump tanks to control. Drilling Wt. 2000, RPM's 200.
	Mud Wt. 9.5, W.L. 6.8, PV 12, pH 9.0, Visc. 47, F.C. 1/32, YP 8.
July 25/71	Depth 9 179' Cored 82'
	Coring continued routinely with rates varying between 8 and 15 mins/ft.
	Formation has charged back to Dolomite and Anhydrite with less
+75°	blocking and fracturing resulting in longer core runs. The deviation
Clear/Mild	is still coming back slowly. 9 105' - 18°, 9 165' - 17°. Mud
	viscosity is holding better with the pH @ 9.0.
	Drilling Wt 2000#, RPM's 200, PP 500 psi.
	Mud Wt. 9.4, PV 13, W.L. 6.5, F.C. 1/32, Solids 9%, Visc. 47, YP 18,
	pH 9.0, Oil 4%.
July 26/71	Depth 9 267' Cored 88'
	Coring at satisfactory rate. Cannot increase drilling wt. due to
	high torque 2 400 - 2 600#. Deviation correcting rather rapidly.
+70°	Last survey @ 9 237' - 15-1/2°. Mixed 30 bbls. of new mud and added
Clear	to system. Dilution had no appreciable effect on solids count.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD · CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. Tufts

DATE	WORK DESCRIPTION
July 26/71	Mud wt. still too high. Drilling wt. 2000#, RPM's 200, PP 450,
Continued	Mud Wt. 9.5, W.L. 8.0, PV 11 Oil 3%, pH 8.0, Visc. 47, F.C. 1/32,
	YP 17, Solids 9%, Chromates 1000 ppm, Cl 7000 ppm.
July 27/71	Depth 9 339' Cored 72'
+85°	Coring @ 8 - 12 mins/ft. Formation predominantly anhydrite. Blew
Clear	two hydraulic motors. Shut down for repairs. The present GMs are
	having trouble handling the drilling load at this depth.
	Drilling Wt. 2000+, RPMs 200+, PP 450.
	Mud Wt. 9.5, W.L. 7.8, PV 12, pH 9.0, Solids 10%, Visc. 47, F.C. 1/32,
	YP 14, Oil 3%, Cl 8000 ppm, Chromates 900 ppm.
July 28/71	Depth 9 371' Cored 32'
	Torque started to build up (2700+). Lithology unchanged, drilling
	predominantly anhydrite some dolomite. Pulled bit #28. Serviced
+85°	core bbl. and ran in hole w/new bit #29D, Series 25. No series 10
Clear	bits on location. Round trip took 13 hrs. Blew out hydraulic hose.
	Shut down for repairs to hose and wireline unit which had tangled
	cable. Lost 15-20 bbls of mud while tripping. Unable to establish
	where fluids are being taken in formation.
	Drilling Wt. 2000#, RPMs 200+, PP 450.
	Mud Wt. 9.4, W.L. 8.4, PV 12, pH 8.5, Solids 10%, Visc 50,
	F.C. 1/32, YP 17, Oil 3%, Chromates 600 ppm.
	Deviation @ 9 361' - 12-1/2°. Correcting too fast.
July 29/71	Depth 9 414' Cored 43'
	Rig shut down several times during the day for repairs. Main
	hydraulic line ruptured requiring replacement. Then the control
+85° Clear	in the hydraulic control panel broke. The main drive chain on
Late p.m.	the wireline retrieving unit broke and had to be repaired. Then
Thunder	the power swivel quite working. A new swivel had to be brought
storms	up from the McKenzie River by Helicopter and installed. A few
	minutes later the hydraulic motor which powers the swivel quite again,

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. Tufts

DATE	WORK DESCRIPTION
July 29/71	requiring repair. Coring resumed @ 5-8 mins/ft. in anhydrite. Torque
Continued	very high @ 2700 - 3000. Drilling Wt. 2500#, PP 400.
	Mud Wt. 9.5, PV 10, W.L. 9.2, Oil 3%, pH 9, Visc. 47, YP 9,
	F.C. 1/32, Solids 8%.
July 30/71	Depth 9 497' Cored 83'
	Coring satisfactorily @ 7-10 mins/ft. when on bottom. Drilling
	in anhydrite for the most part. Experiencing troubles with the
	power swivel again. Shut down for repairs to the wireline unit
+75°	again. Deviation surveys very erratic. Obtained widly divergent
Clear	readings using 3 different Totco clocks.
Late p.m.	eg: 9 361' - 12-1/2° w/90° clock
Thunder	9 417' - 18° w/16° clock
storm	9 430' - 17° w/24° clock
Heavy rain	9 476' - 11° w/24° clock
	The 17° and 18° readings are considered questionable. Confirming
	readings will be taken at these depths after the next trip. Will
	continue to use the 90° clock if the 24° clock does not check out.
	Heavy rains overnight alleviated water shortage somewhat.
	Due to apparent carelessness the lifter case was not properly
	tightened on the core tube resulting in it dropping off when core
	was being retrieved. The drill string has to be round tripped
	to retrieve the core. Will lose approx. 14 hrs. due to this problem.
	Drilling Wt. 2500#, RPMs 200+, PP 450.
	Mud Wt. 9.5, W.L. 5.5, PV 11, pH 9.0, Cl 8000 ppm, Visc. 47,
	F.C. 1/32, YP 13, Chromates 800 ppm, Oil 3%, Solids 9%.
July 31/71	Depth 9 497'
	Tripped out to retrieve core from outer bbl. Inner tube had 4'
	of core (cut 11'). Replaced bit and started back in hole with
+70°	rods. Drifted rods on way in hole to assure that no core was hung
Clear	up in upsets. Knocked out additional 5' of core on way in.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni **LOCATION** M-43A

ENGINEER D. Tufts

DATE	WORK DESCRIPTION
July 31/71	Main GM power source blew the fan through the radiator with rods
Continued	approx. 3/4 of the way in the hole. Engine cannot be repaired.
	No replacement engines on location. Shut down to wait on new
	or replacement engines.
	Considering mechanical problems experienced over the past two
	weeks this rig appears to have reached the limit of its capacity
	with its present equipment. Installed new spool of wireline on
	the retrieving unit.
	Heavy rains overnight again helped solve water shortage problem
	temporarily.
	New GM engines and shipment of aluminum rods required to finish this
	hole have not arrived and whereabouts not certain (long overdue).
Aug 1/71	Depth 9 505' Cored 8 ft.
	While waiting on replacement GM engine the mud tanks were dumped
	and cleaned to reduce solids and help control mud weight. The
	engine was flown in from H & S Little Dal location by Assoc. 204 Helicopter.
	Installed by 1:00 a.m. July 31, 1971. Finished tripping in the
	hole. Circulated on bottom to clean up the hole. Gas cutting
	detected on Baroid gas detector; producing higher background
	readings than normal. There was no cutting evidenced in the mud
	in the tanks nor was there any volume change or kicking. Started
	coring again at 6:30 a.m.
	Drilg. Wt. 2000, RPM's 110-150, Pump 375-400, Mud wt. 9.0,
	W.L. 10.5, PV 6, Oil 3%, Chromates 700 ppm, Vis. 44, pH 9.0,
	YP 8, Solids 6%.
	Retained 204 Helicopter to bring fuel to the location from the
	river landing.
Aug 2/71	Depth 9 572' Cored 67 ft.
85°+	Coring satisfactorily when on bottom. Shut down several times
Clear	to work on wire line unit. Had some pump problems and leaking
	hydraulic hoses. Wire line problems were main reason for low

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Bahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
Aug 2/71	footage today. Still recording gas intrusion on gas detector.
continued	Some very minor gas cutting in the mud. No kicking or flow on
	connections.
	Drlg. Wt. 2000, RPM's 120, Pump Press. 375, Torque 2900,
	Mud wt. 9.1, WL 8.4, PV 6, Oil 4%, pH 8.5, Vis. 44, FC 1/32,
	YP 9, Solids 6%, Chromates 800.
	Finished moving all fuel up from the McKenzie with Assoc. 204
	Helicopter.
Aug 3/71	Depth 9 662' Cored 90 ft.
	Penetration rate improved slightly. Still drilling mostly an-
+75°	hydrite with dirty dolomite. Short section (3') of vuggy poro-
Clear	sity 9 574-77. Mud still slightly gas cut. No kicks or signi-
	ficant volume changes. Core retrieving operations slow due to
	constant troubles with wire line unit. Shut down for 2 hours
	again to work on power swivel.
	Drlg. Wt. 2000, RPM's 200, Pump Press. 375, Mud wt. 9.1, WL 7.0,
	PV 7, Oil 4%, pH 8.5, Vis. 44, FC 1/32, YP 9, Solids 6%
August 4/71	Depth 9 662'
	Unable to get inner barrel to seat. Had to trip drill string to
+45°	retrieve core jammed in outer bbl. Received word that new engines
Heavy Rain	were due in Norman Wells today. Stayed on bank with pipe in order
	to make repairs to the rig. Replaced drilling line and put new
	spool of cable on wireline unit. (Second one this week). Repaired
	brakes on drawworks. Removed old GMs to prepare for new engines.
	Hauled new 4 Cyl. GM engines from Norman Wells via Klondike 204
	Helicopter (2 trips). Installing GMs at report time. Water
	supply situation improved due to heavy rains. Lease conditions very
	bad. Ice under derrick foundations still solid. No indications to
	date of rig settling.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadtoni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
Aug. 5/71	Depth 9 692' Cored 30 ft.
	Completed the installation of the new GM engines. Ran back in
+60° Clear	the hole with new bit #31D. Circulated to condition hole and started
with rain	drilling @1:15 a.m. Aug. 5. Experienced pump troubles for approxi-
overnight	mately one hour. Blew out a hydraulic hose. Coring in anhydrite
	at 7-10/mins. per ft. Gas detector reading lower @ 10-15 units.
	Mud only slightly gas cut. Evidence of minor fluid losses
	approximately 5 bbls.
	Drilling wt. 2000#, RPM's ± 200, Pump 375 psi
	Mud wt. 9.1, WL 5.5, PV 8, Oil 3%, pH 8.5, Vis. 45, FC 1/32,
	YP 9, Solids 8%.
	Lease conditions bad due to heavy rains.
Aug 6/71	Depth 9 742' Cored 50 ft.
	Cored from 9 692 - 9 741' at 5-7 mins/ft. in anhydrite and
+65°	dolomite. Shut down for 3½ hours to repair the power swivel
Cloudy	again. Started coring and made one when circulation was lost.
Rain	All hole fluid was lost and the well went on vacuum. The flow
Showers	senror did not function and gave no warning. Mixed 5 sax of
	Mica Tex fine and pumped away with an additional 80 bbls. of mud.
	Total fluid lost to this point estimate at 240 bbls. Pulled core
	tube and started pumping lost circulation material. Pumped 10
	bbl. pills of Kwik seal followed by 30 bbls. of Quick Trol with
	Mica Tex. Used mud sump for make up water. Plugged off drill
	string with lost circulation material and had to fill annulus to
	reserve circulate out. Took approximately 270-290 bbls. of mud
	and lost circulation material to plug formation and fill the
	annulus. At report time a batch of mud was being mixed to try
	to reverse circulate the plug out of the drill string. The
	entire operation of controlling this lost circulation was severely
	hampered by the size and type of equipment available for handling
	mud and water. It would have been extremely difficult if not
	impossible to adequately and safely control this well if there had

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43'

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
Aug. 6/71	been a gas flow of any size following the lost circulation. A
continued	total estimated at 750 bbls. of mud has been pumped into the
	formation.
Aug 7/71	Depth 9 775' Cored 33'
	Mixed mud and pressured up annulus. Required 300 psi to break
465°	circulation. Established reverse circulation down annulus.
Clear	Pumped several bbls. of lost circulation material out of the
	drill pipe. Picked up the Kelly and started circulating back
	down the drill pipe. Ran rods back in the hole which had been
	pulled while trying to break circulation (12 stands). Blew
	lost circulation material plug out of each rode on way in.
	Rigged to circulate and screen out lost circ. material. Cir-
	culated L.C. material with pressures varying from 0-300 psi.
	Losing fluid continuously in varying amounts up to 20 bbls./hr.
	Circulated from 11:00 a.m. to 9:00 p.m. to clear system of coarse
	L.C. material which would block core tube. Ran tube and started
	coring. Gas detector indicated minor background readings up to
	25 units. Coring rate fairly even and pump pressure varies from
	50-250 psi. Formation highly fractured and rubbly resulting in
	blocked tube and short runs. Formation continued to take mud
	at rates up to 20 BPH all night. Cannot use coarse L.C. materials
	while coring. Continued to add Mica-Tex (fine) and walnut hulls
	(fine) while coring. It is difficult (and expensive) to try to
	maintain any kind of mud properties while mixing continuously to
	keep up with fluid loss to the formation.
	Drlg. wt. 2000, RPM's 150-200, Pump 50-300 psi
	Mud wt. 8.5-8.8, WL 5.0, Oil % 0, PV 10, pH 11.0, Vis. 44-48,
	FC 1/32, Solids 2%, YP 5.
	If fluid losses continue at the present magnitude we will be
	faced with a serious water shortage.
	- 104 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts

DATE	WORK DESCRIPTION
Aug. 8/71	Depth 9 905' Cored 130'
	Formation continued to take fluid all day in amounts varying from
+75°	2-20 BPH. Discontinued use of mud additives until fluid losses
Clear	are under control. Maintaining enough viscosity to carry lost circ.
Rain	material. Ran out of Mica Tex fine. Started using walnut fine.
Overnight	Penetration rate increased significantly due in part to reduced
	mud weight and viscosity. Core retrieval time is also reduced
	as the tube drops faster in the lighter mud. Deviation at
	9 900' was 10½°. Approximately 50' of vuggy porosity was drilled
	before breaking back into dense dolomite. Fluid losses had dropped to
	2 BPH at report time.
	Drlg. wt. 1500-2000, RPM's 200, Pump Press. 250-325 psi.
	Mud wt. 8.6, WL 5.6, pH 8.5, PV 9, Solids 3%, Vis. 46, FC 1/32,
	YP 4, Oil 1%
Aug 9/71	Depth 10 013' Cored 108'
	Cored and pulled core No's. 420-426. Average penetration rate
	was 9.8'/hr. Cored evenly with low torque. Fluid losses to the
	formation gradually dropped off to a negligible point by report
	time. Mud properties although difficult to control have been
	satisfactory. The weight and viscosity have been ideal for cor-
	ing but the gel structure is poor. Left core in outer barrel
	when retrieving core #426. Started tripping rods to clear the
	outer barrel. Received word from Calgary to run a DST over the
	porous interval where circulation was lost. Tester being flown
	in. Continued to pull out of hole at report time. Prepare for
	DST.
	Drlg. wt. 2000, RPM's ± 200, Pump Press. 350, Torque 2600
	Mud wt. 8.6, WL 5.8, pH 8.5, PV 9, Oil 2%, Vis. 44-47, FC 1/32 S
	YP 1, Solids 0

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER D. L. Tufts/L. J. Kaemar

DATE	WORK DESCRIPTION
Aug 10/71	Depth 10 013'
	Pulled out of hole and stood back coring assembly and D.C.
+55°	Picked up HOWCO DST assembly and ran back in the hole to con-
Overcast	duct DST #2. The tool hung up at 8 880' setting the packer
with rain	and opening the tool. The tool was pulled up and worked free.
	The string took on weight indicating the possibility that mud
	had entered the pipe while the tool was open. Finished tripping
	to the bottom. Lost circulation (approximately 100 bbls. of
	fluid were lost to the formation). Set the packer and continued
	the test anyway. There was no air blow on the 5 minute preflow.
	I.S.I. 60 mins. The valve was opened for 15 mins. with no air
	blow. Mud dropped in annulus. Shut in for 30 minutes and
	started out of the hole. Note D.S.T. report.
	Depth 10 013'
Aug 11/71	POH with DST No. 2. Welder started fire while welding in boiler
	room. Complete loss - Boiler, Light Plant, BOP Accumulator and
Rain	remote controls. Use welder plant and Schlumberger Onan for
O/C	Power Supply. POH. Found drill pipe washout at 1920' above
50°	tool. DST charts indicate that pipe was full of mud during
	test indicating a misrun. On standby waiting on fire damage
	repair.
Aug 12/71	Depth 10 013'
	Standby. Waiting on light plant and accumulator. Mix mud and
	rig inventory.
Aug 13/71	Depth 10 013'
Clear 55°	Standby. Run conditioning trip for Wireline logging.
Aug 14/71	Depth 100
	POH. Wait on Schlumberger. Schlumberger ran IES - TD to cas-
Clear 55°	ing shoe. CBN - TD to casing shoe. Sonic failed. Approximately
	1 000' on bottm run of questionable value. No charge.

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Aug 15/71	Depth 10 013'
	Wait on caliper tool. Found out PWA did not carry out of Edmonton.
	Set up and check accumulator and controls. RIH with DST. Rig
	up head, etc. Wait on first light. DST No. 3.
Aug.16/71	Depth 10 013'
	DST No. 3. Routine. Note DST Report. Lay down test tools.
O/C 55°	Pick up core Bbl. RIH with Bit No. 32D 4¾" Diamond S-25. Losing
	mud. Mix mud and lost circulating material to seal hole. Lost
	Circ. zone opened up during flow from DST. Charts from DST
	showed hydrostatic approx. equal TD C.I.P.
Aug 17/71	Depth 10 076' Cored 63'
	Continued mixing lost circ. material and circ. Cut and recover
	core. Drl. wt. 2000#, PPm 200, Pump 350 PSI, Torque 2600
	Mud: Wt. 8.6, Vis. 45
Aug 18/71	Depth 10 212' Cored 136'
	Core and recover core. Drl. wt. 2000#, RPM 170, Pump 350 psi
	Torque 2800. Mud: wt. 818, Wt. 7.6, Gels 0/0, % Solids 2
	Vis. 45, PV 6, YP 4, pH 9.0, % Oil 2
Aug 19/71	Depth 10 239' Cored 27'
	Cut and recover core. Broke jar on overshot while pulling inner
	bbl. POH Bit No. 32D. 210' in 20 Hrs. Repair GM. RIH with
	Bit No. 33D 4¾" Diamond S-25. Clean out core dropped on btm.
	Pull inner bbl. Cut and recover core. Lost 2" in mud tank
	while tripping (8 bbl./5 hrs.) Drilling some fracture porosity
	at 10'/hr. Drl. wt. 2000#, RPM 180, Pump 450 psi, Torque 2600.
	Mud: wt. 8.6, Vis. 46.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD - CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasmar

DATE	WORK DESCRIPTION
Aug 20/71	Depth 10 272' Cored 49'
	Cut and recover core. Receive word of possible abandonment at
Clear 60°	2:00 p.m. Standby and circ. hole. Start to take fluid. Add
	lost circ. material and add makeup vol. from sump. POH to log.
	Drlg. wt. 2000#, RPM 180, Pump 350 psi, Torque 2800
	Mud wt. 8.6, Vis. 44
Aug. 21/61	Depth 10 272'
	POH. Bit No. -3D 4¾" Diamond S-25 , 49' in 5 hrs. W.O. Schlum-
	berger. Rig up loggers. Run sonic (integrated) TD to casing
	shoe. Run caliper - TD to casing shoe.
Aug 22/71	Depth 10 272'
	Finish Schlunberger logging. W.O.O. Start to tear out rig -
	steam lines, prefabs, etc.
Aug 23/71	Depth 10 272'
	WOO. Tearing down rig and crating. Helicopter flying 2-3/4"
	rods to river. Receive orders to abandon. Drill pipe hung at
	TD. Close pipe rams with rig pump. Pump sump fluid and invert mud
	(out of storage) down hole. 450 psi surface pressure (200 SPM).
	Having trouble moving invert to sunction tank because of viscosity
	of mud. Hook 2-2" pumps in series.
Aug 24/71	ETD 9 256'
	Pump away invert mud into formation. Rig to run abandonment
	plug No. 1; 9 256' - TD. With rig equipment mix 100 sax Oilwell
	cement, 400# CFR-2 at 15.4#/gal. Start mix 2:41 a.m. Start
	Disp. cement 3:05 a.m. Start Disp. mud (water) 55 bbl. 3:18 a.m.
	CIP 3:40 a.m. Pull out 1 500'. Circ. Lay down rods. Circ.
	Clean up.
	- 108 -

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD. CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kasnar

DATE	WORK DESCRIPTION
Aug 25/71	ETD 9 260'
	WOC, Tearing out. Tag top of plug No. 1 at 9 260'. POH.
	Laying down rig to set plug No. 2.
Aug 26/71	ETD 3 620'
	Ran abandonment plug No. 2, 3 645 - 3 760'.With rig equip.
	mix 16 sax Oilwell cement at 15.2#/gal. Start mix 11:52 A.M.
	Start Disp. cement 12:20 p.m. with mud (water) 22 bbl. CIP
	12:45 p.m. Pull 4 stds. (240 ft.) Tear out. Ran in and tagged
	top of plug No. 2 at 3 620'. 9:30 p.m. Lay down 1 500' of rods
	and wait on corrosion inhibitor.
Aug 27/71	ETD 3 620'
	Circ. while tearing out and crating. Inventory mud stock and
	weatherproof cover. Move one hut to river. Men working day-
	lights.
Aug 28/71	ETD 3 620'
	Tear out. Receive corrosion inhibitor. Mix 30 gal. of corrosion
	inhibitor with water and pump into surface casing. Lay down
	rods to 540'. Disp. casing with 10 drums diesel (450 Imp. gal.).
	Hole was not filled as rods were layed down. Diesel might be
	further down hole than 540'. Tear out BOP's.
Aug 29/71	ETD 3 620'
	Tear out BOP's. Weld on casing nipple to 5" casing stub. Ap-
	proximately 5' long - 3-4' above Ground Level. Pick up 5"
	casing with elevators. Move casing approximately 8" with
	100 000# pull to unseat and remove slips. Slips - non latching type
	cut off with torch. Slack off, tear out rig.

E-7

BLAIN, BINNIE & ASSOCIATES
ENGINEERING LTD CALGARY

CHRONOLOGICAL HISTORY

WELL Candex et al Dahadinni LOCATION M-43A

ENGINEER L. J. Kanmar

DATE	WORK DESCRIPTION
	ACTUAL DATE - WORKING DAYLIGHTS ONLY
Aug 29/71	Tear out rig. Lay down Derrick crate equipment. G47 Helicopter flying equipment to river. One man at river.
Aug. 30/71	Tear out rig. Move 2 sleeping huts to river. G47 Helicopter working.
Aug. 31/71	As above.
Sept. 1/71	As above. Bell 205 Helicopter arrived at lease at 7:30 p.m.
Sept. 2/71	Tear out and crate. Bell 205 made 32 trip to river with equipment. G47 inoperative with carburator trouble most of day.
Sept. 3/71	Tear out. Cut off casing bowl and weld on PL over 7"/5" annulus. Install 5" Brd x 3-1/2" NTP swage. Valve did not arrive. G47 working. Bell 205 made trip.
Sept. 4/71	Move out. Engineer left location at 12:30 p.m. on way out of job. P & A.

E-7

FLUID ANALYSES

FOR

CANDEX DEVELOPMENT LIMITED

CANDEX ET AL DAHADINNI M-43A
DAHADINNI RIVER AREA
N. W. T.

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
CALGARY - EDMONTON - REGINA

CORE LABORATORIES - CANADA, LTD.

Company	CANDEX DEVELOPMENT LIMITED	Formation		Page	1 of 4
Well	CANDEX ET AL DAHADINNI M-43A	Drilling Fluid	WATER BASE MUD	File	913-1214
Field	WILDCAT, NORTHWEST TERRITORIES	Elevation		Date Report	AUG. 24/71
Location	63° 52' 59.03" N 124° 39' 15.07" W	Analysis	FULL DIAMETER	Analyst:	RM MH DS
		Remarks			

Sample Number	Interval Represented, Feet: Depth	Interval Represented, Feet: Thick	Permeability to Air, Millidarcys: K Max	Permeability to Air, Millidarcys: K90°	Permeability to Air, Millidarcys: K-V	Permeability Feet	Porosity Per Cent	Porosity Feet	Density, gm/cc: Bulk	Density, gm/cc: Grain	Residual Saturations, Per Cent Pore Space: Oil	Residual Saturations, Per Cent Pore Space: Total Water	Visual Examination
CORE # 408 9702' - 9722' (REC. 20') (1 BOX)													
-	9702.0-09.2	7.2	-	-	-	-	-	-	-	-			DENSE
-	9709.2-22.0	12.8	-	-	-	-	-	-	-	-			NOT RECEIVED
CORE # 410 9742' - 9751' (REC. 7') (1 BOX)													
1	9742.0-42.8	0.8	*	-0.01	*	-	5.1	4.08	2.68	2.82			I PPV
2	9742.8-44.2	1.4	0.10	0.07	-0.01	0.14	3.4	4.76	2.85	2.95			PPV AF
-	9744.2-49.0	4.8	-	-	-	-	-	-	-	-			DENSE & RUBBLE
-	9749.0-51.0	2.0	-	-	-	-	-	-	-	-			LOST CORE
CORE # 411 9751' - 9755' (REC. 4') (1 BOX)													
-	9751.0-55.0	4.0	-	-	-	-	-	-	-	-			DENSE & RUBBLE
CORE # 412 9755' - 9761' (REC. 6') (1 BOX)													
3	9755.0-56.0	1.0	*	-0.01	*	-	1.5	1.50	2.82	2.87			PPV
4	9756.0-56.9	0.9	11.30	0.16	6.10	10.17	0.8	0.72	2.83	2.85			SCATTERED PPV VF
-	9756.9-58.1	1.2	-	-	-	-	-	-	-	-			DENSE & RUBBLE
5	9758.1-58.9	0.8	*	0.34	*	0.27	1.1	0.88	2.81	2.84			SCATTERED PPV VF
6	9758.9-61.0	2.1	*	-0.01	*	-	1.7	3.57	2.81	2.86			PPV F
CORE # 413 9761' - 9772' (REC. 11') (2 BOXES)													
7	9761.0-62.1	1.1	0.52	0.14	-0.01	0.57	4.5	4.95	2.71	2.83			PPV FEW SV F
8	9762.1-63.2	1.1	0.16	0.11	-0.01	0.18	3.9	4.29	2.72	2.84			PPV F

CORE LABORATORIES - CANADA, LTD.

Company CANDEX DEVELOPMENT LIMITED
Well CANDEX ET AL DAHADINNI M-43A
Formation
Drilling Fluid WATER BASE MUD

File 913-1214

Sample Number	Depth	Thick	Permeability to Air, Millidarcys K Max	K90°	KV	Permeability Fair	Porosity Fair	Porosity Fair	Density, gm/cc Bulk	Grain	Residual Saturation Fr Cent Pore Space Oil	Total Water	Visual Examination
	CORE # 413 (Cont'd)												
9	9763.2-64.6	1.4	•	-0.01	•	-	3.6	5.04	2.74	2.84			FPV F
10	9764.6-66.4	1.8	•	-0.01	•	-	7.2	12.96	2.67	2.88			1 FPV AF
11	9766.4-67.3	0.9	0.75	0.27	3.23	0.68	5.4	4.86	2.71	2.87			FPV A VF
12	9767.3-68.4	1.1	-0.01	-0.01	-0.01	-	2.0	2.20	2.77	2.83			FEW FPV
-	9768.4-72.0	3.6	-	-	-	-	-	-	-	-			DENSE & RUBBLE
	CORE # 414 9772' - 9790' (REC. 18') (3 BOXES)												
-	9772.0-81.2	9.2	-	-	-	-	-	-	-	-			DENSE
13	9781.2-82.5	1.3	251.00	2.44	0.40	326.30	2.7	3.51	2.85	2.92			DENSE AF
14	9782.5-83.4	0.9	514.00	2.49	0.40	462.60	3.6	3.24	2.82	2.93			FEW SV AF
15	9783.4-84.5	1.1	18.90	14.20	2.11	20.79	1.9	2.09	2.85	2.90			FEW FPV AF
-	9784.5-90.0	5.5	-	-	-	-	-	-	-	-			DENSE
	CORE # 415 9790' - 9811' (REC. 21') (3 BOXES)												
-	9790.0-01.3	11.3	-	-	-	-	-	-	-	-			DENSE
16	9801.3-01.9	0.6	•	-0.01	•	-	2.1	1.26	2.79	2.85			1 FPV F
17	9801.9-02.7	0.8	73.50	0.10	-0.01	58.80	5.5	4.40	2.71	2.86			1 FPV F
18	9802.7-03.6	0.9	9.52	0.05	1.03	8.57	1.2	1.08	2.82	2.85			FPV F
19	9803.6-04.2	0.6	0.32	0.16	-0.01	0.19	4.7	2.82	2.72	2.85			SV
20	9804.2-05.0	0.8	0.70	0.17	-0.01	0.56	3.0	2.40	2.77	2.85			FPV
21	9805.0-06.0	1.0	301.00	5.08	1.52	301.00	2.9	2.90	2.80	2.88			FPV A VF
-	9806.0-11.0	5.0	-	-	-	-	-	-	-	-			DENSE
	CORE # 416 9811' - 9831' (REC. 20') (3 BOXES)												
-	9811.0-31.0	20.0	-	-	-	-	-	-	-	-			DENSE & RUBBLE

CORE LABORATORIES - CANADA, LTD.

Company CANDEX DEVELOPMENT LIMITED
Well CANDEX ET AL DAHADINNI M-43A

Formation
Drilling Fluid WATER BASE MUD

File 913-1214

Sample Number	Depth	Thick	K Max	KHF	KV	Porosity Fraction	Porosity Percent	Porosity Fraction	Grains per cc S.G.	Grains per cc Grain	Residual Saturations Percent Pore Space Oil	Total Water	Visual Examination
	CORE # 417 9831' - 9851' (REC. 20') (3 BOXES)												
-	9831.0-47.3	16.3	-	-	-	-	-	-	-	-			DENSE
22	9847.3-48.2	0.9	*	0.15	*	0.14	2.4	2.16	2.77	2.84			FPV VF
23	9848.2-49.1	1.1	0.44	0.18	-0.01	0.48	4.8	5.28	2.71	2.85			FPV F
-	9849.3-51.0	1.7	-	-	-	-	-	-	-	-			DENSE
	CORE # 418 9851' - 9871' (REC. 20') (3 BOXES)												
24	9851.0-52.2	1.2	0.04	0.02	-0.01	0.05	1.6	1.92	2.78	2.82			FPV
-	9852.2-71.0	18.8	-	-	-	-	-	-	-	-			DENSE
	CORE # 419 9871' - 9890' (REC. 19') (3 BOXES)												
-	9871.0-75.4	4.4	-	-	-	-	-	-	-	-			DENSE
25	9875.4-76.7	1.3	0.02	-0.01	-0.01	0.03	3.2	4.16	2.77	2.86			FPV
26	9876.7-77.9	1.2	0.10	-0.01	-0.01	0.12	3.4	4.08	2.75	2.85			FPV
27	9877.9-78.9	1.0	-0.01	-0.01	-0.01	-	3.9	3.90	2.72	2.83			FPV
-	9878.9-85.8	6.9	-	-	-	-	-	-	-	-			DENSE
28	9885.8-86.8	1.0	-0.01	-0.01	-0.01	-	1.2	1.20	2.80	2.83			FPV
29	9886.8-87.7	0.9	-0.01	-0.01	-0.01	-	1.0	0.90	2.81	2.84			DENSE
30	9887.7-88.6	0.9	*	-0.01	*	-	6.3	5.67	2.68	2.86			I FPV
SS31	9888.6-89.5	0.9	-0.01	-	-	-	2.8	2.52	-	-			FPV RUBBLE
SS32	9889.5-90.0	0.5	-0.01	-	-	-	6.5	3.25	-	-			I FPV RUBBLE
	CORE # 420 9890' - 9910' (REC. 20') (3 BOXES)												
33	9890.0-91.2	1.2	0.03	-0.01	-0.01	0.04	4.2	5.04	2.72	2.84			I FPV
34	9891.2-93.5	2.3	-0.01	-0.01	-0.01	-	6.8	15.64	2.66	2.85			I FPV
35	9893.5-95.9	2.4	*	-0.01	*	-	6.1	14.64	2.67	2.85			I FPV
-	9895.9-08.7	12.8	-	-	-	-	-	-	-	-			DENSE
36	9908.7-10.0	1.3	1.05	0.58	-0.01	1.37	1.9	2.47	2.81	2.86			FPV AF

CORE LABORATORIES - CANADA, LTD.

Company CANDEX DEVELOPMENT LIMITED
Well CANDEX ET AL DAHADINNI M-43A

Formation
Drilling Fluid WATER BASE MUD

File 913-1214

Sample Number	Interval Represented, Feet: Depth	Interval Represented, Feet: Thick	Permeability to Air, Millidarcys: K Max	Permeability to Air, Millidarcys: K90°	Permeability to Air, Millidarcys: KV	Permeability Feet	Porosity Fraction	Porosity Feet	Density, gm/cc: Bulk	Density, gm/cc: Grain	Residual Saturations Fractions Pore Space: Oil	Residual Saturations Fractions Pore Space: Total Water	Visual Examination
	CORE # 421 9910' - 9930' (REC. 20') (3 BOXES)												
37	9910.0-11.2	1.2	144.00	89.30	8.78	172.80	5.4	6.48	2.73	2.89			SV AF
38	9911.2-12.5	1.3	1.17	0.13	-0.01	1.52	1.5	1.95	2.82	2.89			PPV F
-	9912.5-14.2	1.7	-	-	-	-	-	-	-	-			DENSE
39	9914.2-14.9	0.7	0.08	0.05	-0.01	0.06	0.8	0.56	2.82	2.85			SCATTERED PPV
40	9914.9-15.8	0.9	0.86	0.34	-0.01	0.77	1.5	1.35	2.83	2.88			FEW SV AF
41	9915.8-16.9	1.1	3.13	2.61	-0.01	3.44	1.0	1.10	2.83	2.86			FEW PPV AF
-	9916.9-18.4	1.5	-	-	-	-	-	-	-	-			DENSE
42	9918.4-19.3	0.9	26.90	19.90	-0.01	24.21	3.8	3.42	2.74	2.85			PPV F
43	9919.3-20.5	1.2	0.33	0.09	-0.01	0.40	1.8	2.16	2.82	2.87			PPV F
44	9920.5-21.8	1.3	*	-0.01	*	-	1.2	1.56	2.83	2.87			PPV AF
45	9921.8-23.0	1.2	1.43	0.41	-0.01	1.72	1.5	1.80	2.82	2.87			PPV AF
46	9923.0-24.0	1.0	0.16	0.08	-0.01	0.16	2.5	2.50	2.79	2.86			PPV A
-	9924.0-25.2	1.2	-	-	-	-	-	-	-	-			DENSE
47	9925.2-25.7	0.5	0.10	0.05	-0.01	0.05	1.9	0.95	2.82	2.87			PPV A
48	9925.7-26.7	1.0	0.17	0.10	-0.01	0.17	0.9	0.90	2.82	2.85			SCATTERED PPV AF
49	9926.7-27.9	1.2	-0.01	-0.01	-0.01	-	1.9	2.28	2.81	2.86			PPV
50	9927.9-29.0	1.1	-0.01	-0.01	-0.01	-	1.8	1.98	2.82	2.87			PPV A
-	9929.0-30.0	1.0	-	-	-	-	-	-	-	-			DENSE
	CORE # 422 9930' - 9949' (REC. 19') (3 BOXES)												
-	9930.0-49.0	19.0	-	-	-	-	-	-	-	-			DENSE

FORMATION TESTING

Technical Report

CALGARY, ALBERTA

A Halliburton Company

COMPANY CANDEX DEVELOPMENT

LAT. 60° 02' 50.1" LONG. 124° 30.7"

FIELD BABADINNI RIVER

WELL NAME AND NUMBER CANDEX ET AL BABADINNI N-48A

EQUIPMENT DATA

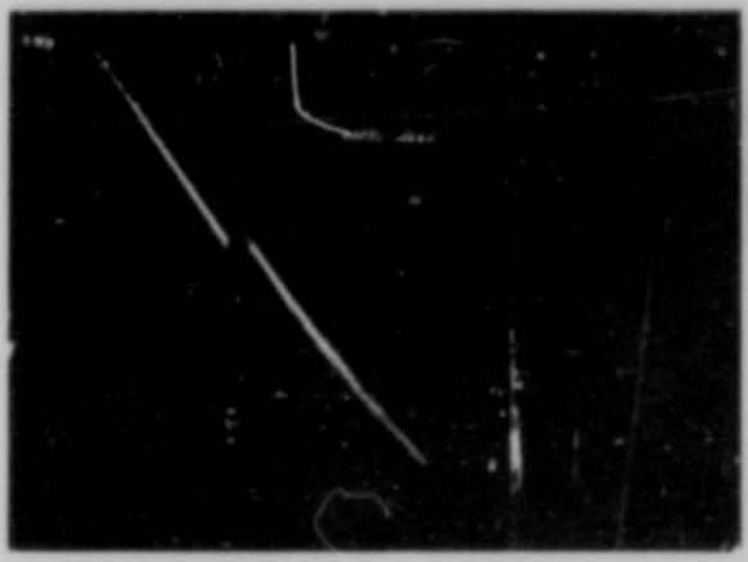
	OD	LENGTH
Reversing Sub	3.50	.80
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters		
Handling Sub & Choke		
Dual CIP Valve	3.00	66.05
Dual CIP Sampler		
Hydrospring Tester	3.00	52.39
DEPTH		9711
Multiple CIP Sampler		
Extension Joint		
BT Running Case	3.00	56.59
DEPTH		9716
BT Recorder	3.00	56.59
		9720
Hydraulic Jar	3.00	72.00
VR Safety Joint	3.00	31.88
Equalizing Crossover		
Packer Assembly	3.50	32.69
DEPTH		9731
Distributor		
Packer Assembly		
DEPTH		
Flush Joint Anchor &	3"	40'
Crossover Adapter		
Blanked Off BT Case		
DEPTH		
HT 500 Temp. Recorder		
Drill Collars & Adapters		
Flush Joint Anchor & Equalizing Tube		
Packer Assembly		
DEPTH		
Distributor		
Packer Assembly		
DEPTH		
Equalizing Seal		
Anchor Pipe Safety Joint		
Side Wall Anchor		
DEPTH		
Drill Collars & Adapters	3 1/2	242.00'
Flush Joint Anchor		
Blanked Off BT Case		
DEPTH		10013

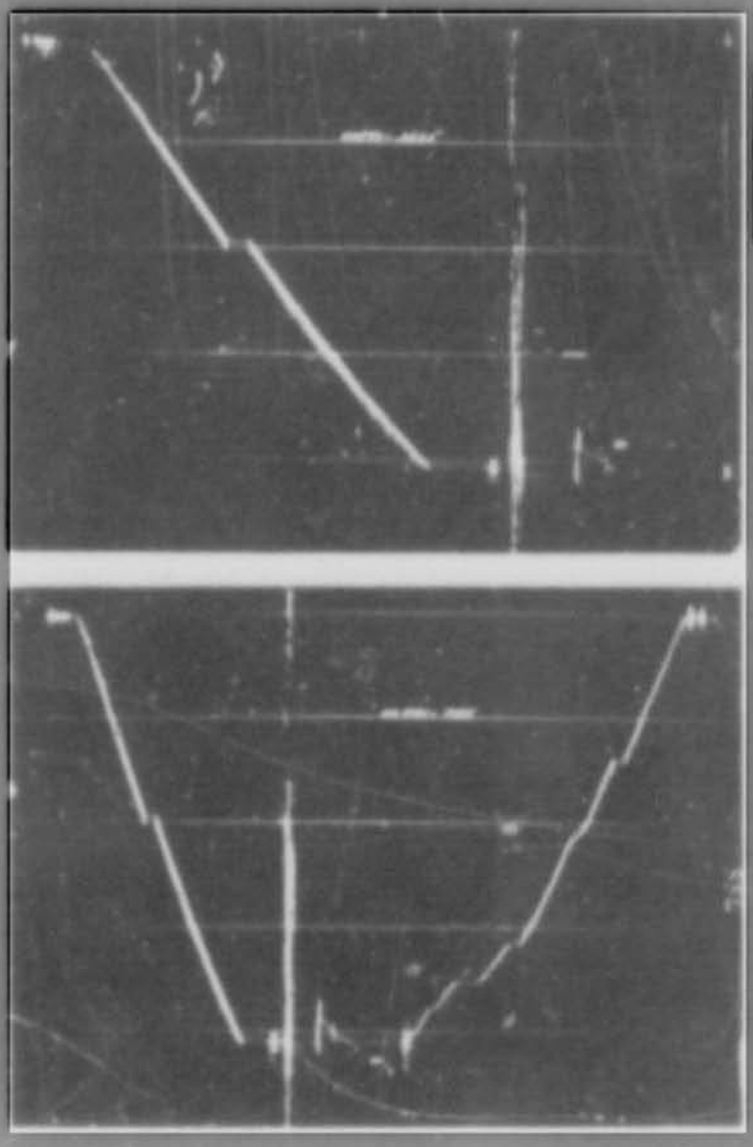
FORM 344A

PRESSURE

TIME

Each horizontal line equal to 1000 psi





Halliburton

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 00841

HALLIBURTON DISTRICT: High Level

JOB DATE: August 14, 1971

OWNER OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA

PRESSURE DATA

	TOP	CENTRE	BOTTOM
GAUGE NUMBER	2065		755
GAUGE DEPTH	9711		9715
CLOCKED OFF	NO	YES NO	NO
GAUGE CLOCK TRAVEL	12 hr.		24 hr.
INITIAL HYDROSTATIC	4075		4070
FIRST FLOW — INITIAL	0		0
FIRST FLOW — FINAL	0		0
FIRST CLOSED IN	4140		4136
SECOND FLOW — INITIAL	3764		3765
SECOND FLOW — FINAL	4110		4105
SECOND CLOSED IN	4128		4125
THIRD FLOW — INITIAL			
THIRD FLOW — FINAL			
THIRD CLOSED IN			
FINAL HYDROSTATIC	0		4104

TYPE OF TEST: Bottom Hole

TESTER: W. Wolodko

TOOL NO.: 163

WITNESS: L. Kasmar

DRILLING CONTRACTOR: Heath & Sherwood

EQUIPMENT AND HOLE DATA

FORMATION TESTED	GAUGE DEPTH / TEMPERATURE: 150
NET PRODUCTIVE THICKNESS ft	MUD TYPE: Gel
K.B. ELEVATION	MUD WEIGHT / MUD VISC
ALL DEPTHS MEASURED FROM: ☑ K.B. ☐ GROUND	CASING OR HOLE SIZE: 4 1/4"
PACKER DEPTH (TOP / BOTTOM): 9731	RATHOLE SIZE: N/A
DEPTH OF TESTER VALVE: 9711	DRILL PIPE (OD / WEIGHT): 3 1/2"
CASING PERFORATED INTERVAL: N/A	DRILL COLLARS ABOVE TESTER (ID / LENGTH)
TOTAL DEPTH: 10013	SURFACE CHOKE: 1"
AMOUNT AND TYPE CUSHION: Nil	BOTTOM CHOKE: .44"

FLUID SAMPLER DATA

SAMPLER PRESSURE AT SURFACE _____ PSIG

RECOVERY: C.C. OIL _____ CU FT GAS _____

C.C. WATER _____

C.C. MUD _____

TOTAL LIQUID C.C. _____

SAMPLE SHIPPED TO LABORATORY: YES ☐ NO ☐

OIL GRAVITY _____ API @ _____ °F

GAS/OIL RATIO _____ CU FT/BBL

XXXXXXX RESISTIVITY @ XX.XX XXXXXXX

			CHLORIDE CONTENT
RECOVERY WATER	@	°F	38,000 PPM
RECOVERY MUD FILTRATE	@	°F	PPM
MUD PIT SAMPLE FILTRATE	@	°F	PPM

TIME PERIODS

	FIRST	SECOND	THIRD		AM	PM
FLOW	5	60		TESTER OPENED	4:45	
CLOSED IN	60	120		PACKER UNSEATED	8:50	

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
2000	Drilling Mud
1570	Muddy Water
5000	Salt Water
8570	TOTAL LIQUID RECOVERY

GAS FLOW RATE DATA

TYPE OF INSTRUMENT: ☐ CRITICAL FLOW PROVER ☐ PITOT TUBE ☐ ORIFICE WELL TESTER ☐ BOX STATIC

FLOW TIME	INSTRUMENT PRESSURE: WATER	MERC	PSI	ORIFICE SIZE	GAS TEMP	GAS RATE MCF/D @ 60°F

REMARKS: Tool open with weak air blow. Tool open for second flow with good blow dying to weak at end of test. Lost approx. 5 bbls. mud in annulus.

* Not readable

FORM 3448 5C

NOMENCLATURE

AOF — absolute open flow potential, MCFD

AOF_t — theoretical absolute open flow potential if damage were removed, MCFD

B — formation volume factor, res bbl/ST bbl

c — compressibility, psi^{-1}

D — gauge depth from KB, ft

DR — damage ratio, dimensionless

E — KB elevation, ft

F — drill pipe capacity, bbl/ft

G — hydrostatic gradient of recovery fluid, psi/ft

h — net productive thickness of formation, ft

h' — thickness of test interval, ft

k — average effective permeability, md

k' — estimated average effective permeability, md

m — slope of final CIP buildup plot, psig/cycle (psig²/cycle for gas)

M — slope of flow plot, min^{-1}

P_D — average pressure drop across damaged zone during flow, psig

P_r — reservoir pressure, psig

P_w — wellbore flow pressure, psig

$\bar{P}$ — weighted average wellbore flow pressure, psig

PI — productivity index, bbl/day·psi

PI_t — theoretical productivity index if damage were removed, bbl/day·psi

PS — potentiometric surface, fresh water corrected to 100°F, ft

Q — average liquid production rate during test, bbl/day

Q_g — measured gas production rate, MCFD at 60°F, 14.4 psia, sp. gr. 0.60

Q_m — maximum production rate, U.S. gal/min

Q_{mt} — maximum theoretical production rate if damage were removed, U.S. gal/min

q — flow rate calculated from hydrostatic of recovery, psi/min

r_i — radius of investigation, ft

r_w — wellbore or shaft radius, ft

R_s — solution gas-oil ratio, MCFD/ST bbl

s — fluid saturation, fraction

t — effective flow time, min

t_p — time interval from start of continuous production to some future point of interest, min

T — reservoir temperature, °R

μ — viscosity, cp

x — time increment during which q values are calculated, min

Z — compressibility factor, dimensionless

ϕ — porosity, fraction

θ — time point during the closed-in period, minutes

Subscripts

g — gas

o — oil

w — water

t — total

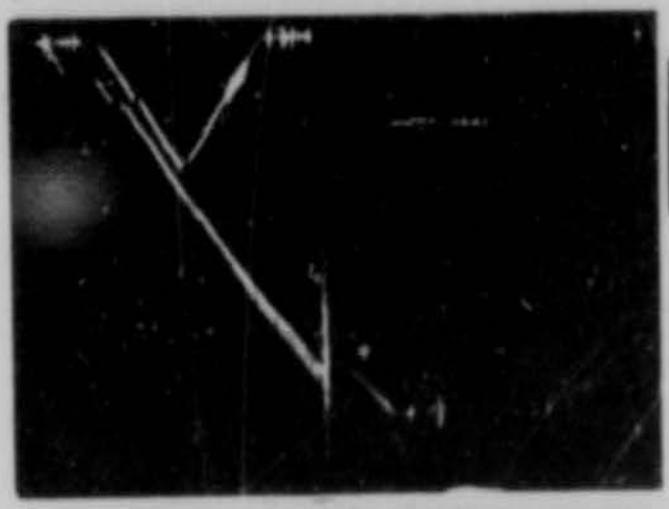
EQUIPMENT DATA

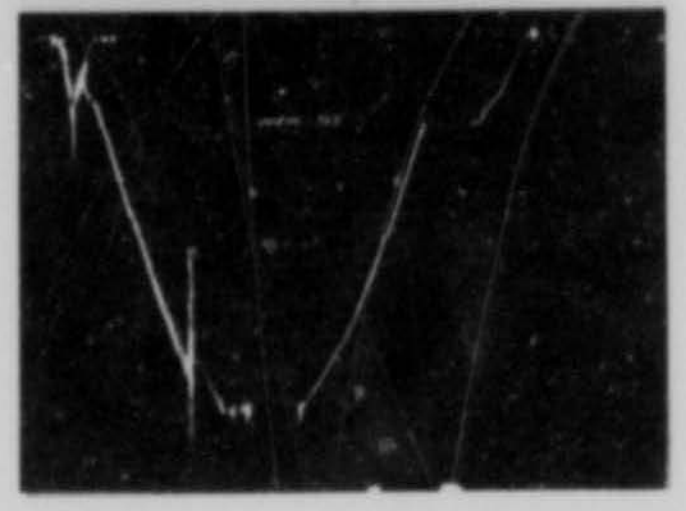
	OD	LENGTH
Reversing Sub	3.50"	.80"
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters		
Handling Sub & Chokes		
Rupture Valve	3.00"	66.05"
Dual C/P Sampler		
Hydrospring Tester	3.00"	52.31"
DEPTH		
Multiple C/P Sampler		
Expansion Joint		
BT Reversing Case (2)	3.00"	56.59
DEPTH		
HT 500 Temp. Recorder		
Hydraulic Jar	3.00"	72.00"
VR Safety Joint	3.00"	31.88"
Equalizing Crossover		
Packer Assembly	3.50"	32.69"
DEPTH		9736
Distributor		
Packer Assembly		
DEPTH		
Flush Joint Anchor		35'
Crossover Adapter		
Blanked Off BT Case		
DEPTH		
HT 500 Temp. Recorder		
Drill Collars & Adapters		
Flush Joint Anchor & Equalizing Tube		
Packer Assembly		
DEPTH		
Distributor		
Packer Assembly		
DEPTH		
Equalizing Seal		
Anchor Pipe Safety Joint		
Side Wall Anchor		
DEPTH		
Drill Collars & Adapters	3 1/2"	242.00'
Flush Joint Anchor		
Blanked Off BT Case		
DEPTH		10013'

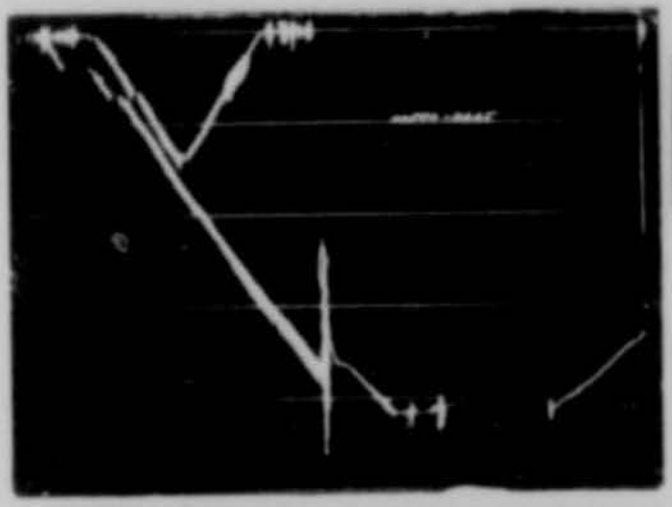
PRESSURE

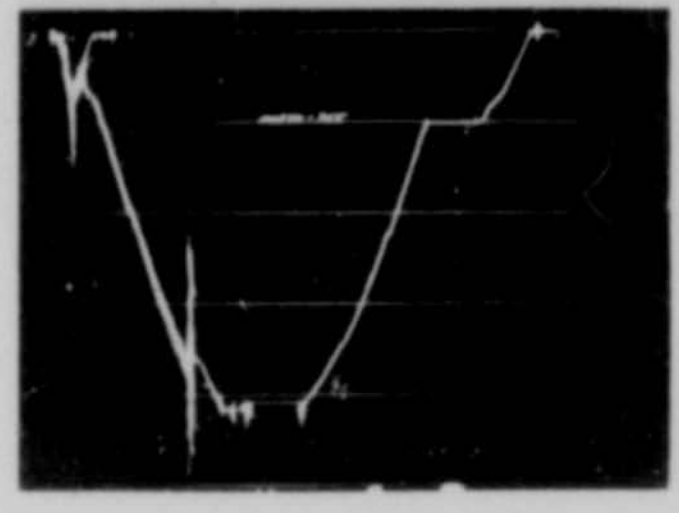
TIME

Each horizontal line equal to 1000 psi.









Halliburton Services Limited

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 00840

HALLIBURTON DISTRICT: High Level

JOB DATE: August 9, 1971

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA

PRESSURE DATA

	TOP	CENTRE	BOTTOM
GAUGE NUMBER	2665		755
GAUGE DEPTH	9716		9720
BLANKED OFF	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	12 hr.		24 hr.
INITIAL HYDROSTATIC	4153		4152
FIRST FLOW INITIAL			
FIRST FLOW FINAL			
FIRST CLOSED IN			
SECOND FLOW INITIAL			
SECOND FLOW FINAL			
SECOND CLOSED IN			
THIRD FLOW INITIAL			
THIRD FLOW FINAL			
THIRD CLOSED IN			
FINAL HYDROSTATIC	4134		4135

TYPE OF TEST: Bottom Hole

TESTER: W. Wolodko — EMPL. NO. 163

WITNESS: D. Tufts

DRILLING CONTRACTOR: Heath & Sherwood

EQUIPMENT AND WELL DATA

FORMATION TESTED		GAUGE DEPTH / TEMPERATURE	°F MEAS / °F EST
NET PRODUCTIVE THICKNESS	FT	MUD TYPE	Gel
K.B. ELEVATION		MUD WEIGHT	8.8
ALL DEPTHS MEASURED FROM	☑ K.B. ☐ GROUND	MUD VISC.	47
PACKER DEPTHS (TOP / BOTTOM)	9736	CASING OR HOLE SIZE	4 1/4"
DEPTH OF TESTER VALVE	9716	RATHOLE SIZE	N/A
CASING PERFORATED INTERVAL	N/A	DRILL PIPE (OD / WEIGHT)	3 1/2"
TOTAL DEPTH	10013	DRILL COLLARS ABOVE TESTER (ID / LENGTH)	
AMOUNT AND TYPE CUSHION	Nil	SURFACE CHOKE	1"
		BOTTOM CHOKE	.44"

FLUID SAMPLER DATA

SAMPLER PRESSURE AT SURFACE _____ PSIG

RECOVERY: C.C. OIL _____ CU.FT. GAS _____

C.C. WATER _____

C.C. MUD _____

TOTAL LIQUID C.C. _____

SAMPLE SHIPPED TO LABORATORY: YES ☐ NO ☐

OIL GRAVITY _____ API @ _____ °F

GAS/OIL RATIO _____ CU.FT./BBL

	RESISTIVITY-REFRACTOMETER OR OR READING		CHLORIDE CONTENT
RECOVERY WATER	@	°F	PPM
RECOVERY MUD FILTRATE	@	°F	PPM
MUD PIT SAMPLE FILTRATE	@	°F	PPM

TIME PERIODS

	FIRST	SECOND	THIRD		AM	PM
FLOW	5	15		TESTER OPENED	6.45	
CLOSED IN	60	30		PACKER UNSEATED	8:45	

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
1920	Drilling Mud
1920	TOTAL LIQUID RECOVERY

GAS FLOW RATE DATA

TYPE OF INSTRUMENT: ☐ CRITICAL FLOW PROVER ☐ PITOT TUBE ☐ ORIFICE WELL TESTER ☐ SIDE STATIC

FLOW TIME	INSTRUMENT PRESSURE: WATER	MERC	PSI	ORIFICE SIZE	GAS TEMP	GAS RATE MCFD @ 60°F

REMARKS: Misrun. Washed out pipe

COMPANY: CANDEX DEVELOPMENT

LEGAL DESCRIPTION: 63 52'59.03 124 39'15.07

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: DAHADINNI RIVER

TEST NUMBER: 2

WELL NAME AND NUMBER: CANDEX ET AL-4A

TESTED INTERVAL: 9736 - 10013

FORM 3448 5C

NOMENCLATURE

AOF — absolute open flow potential, MCFD

AOF_t — theoretical absolute open flow potential if damage were removed, MCFD

B — formation volume factor, res bbl/ST bbl

c — compressibility, psi^{-1}

D — gauge depth from KB, ft

DR — damage ratio, dimensionless

E — KB elevation, ft

F — drill pipe capacity, bbl/ft

G — hydrostatic gradient of recovery fluid, psi/ft

h — net productive thickness of formation, ft

h' — thickness of test interval, ft

k — average effective permeability, md

k' — estimated average effective permeability, md

m — slope of final CIP buildup plot, psig/cycle ($psig^2$/cycle for gas)

M — slope of flow plot, min^{-1}

P_D — average pressure drop across damaged zone during flow, psig

P_r — reservoir pressure, psig

P_w — wellbore flow pressure, psig

$\bar{P}$ — weighted average wellbore flow pressure, psig

PI — productivity index, bbl/day·psi

PI_t — theoretical productivity index if damage were removed, bbl/day·psi

PS — potentiometric surface, fresh water corrected to 100 °F, ft

Q — average liquid production rate during test, bbl/day

Q_g — measured gas production rate, MCFD at 60 °F, 14.4 psig, sp. gr. 0.60

Q_m — maximum production rate, U.S. gal/min

Q_{mt} — maximum theoretical production rate if damage were removed, U.S. gal/min

q — flow rate calculated from hydrostatic of recovery, psi/∞ min

r_i — radius of investigation, ft

r_w — wellbore or shaft radius, ft

R_s — solution gas-oil ratio, MCFD/ST bbl

s — fluid saturation, fraction

t — effective flow time, min

t_i — time interval from start of continuous production to some future point of interest, min

T — reservoir temperature, °R

μ — viscosity, cp

x — time increment during which q values are calculated, min

Z — compressibility factor, dimensionless

ϕ — porosity, fraction

θ — time point during the closed-in period, minutes

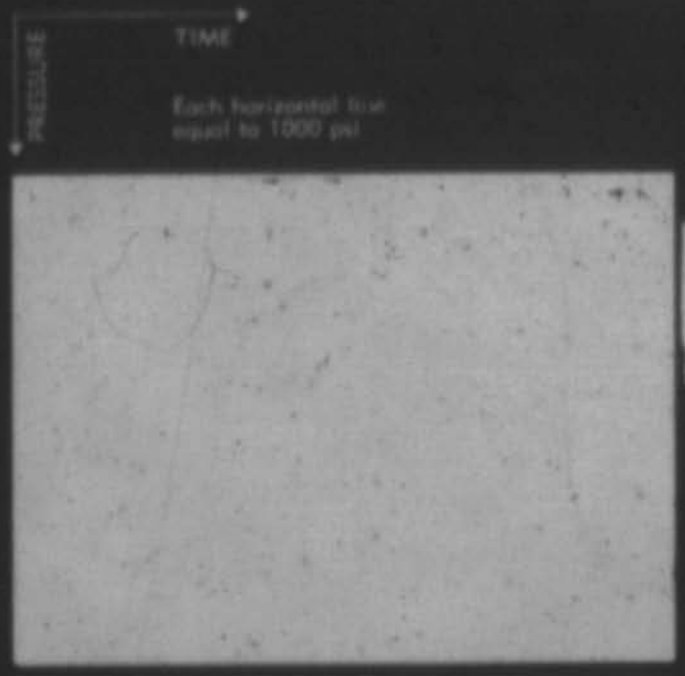
Subscripts

g — gas

o — oil

w — water

t — total


TIME
PRESSURE
Each horizontal line
equal to 1000 psi

Halliburton

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 00832

HALLIBURTON DISTRICT: High Level

JOB DATE: February 26, 1971

OWNER OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA

PRESSURE DATA

	TOP	CENTRE	BOTTOM
GAUGE NUMBER	2820		3364
GAUGE DEPTH	1096		1102
CLOCKED OFF	[illegible] NO	[illegible] NO	[illegible] NO
HOUR CLOCK TRAVEL	12 hr.		12 hr.
INITIAL HYDROSTATIC	432		429
FIRST FLOW — INITIAL	364		368
FIRST FLOW — FINAL	357		364
FIRST CLOSED IN	372		378
SECOND FLOW — INITIAL	361		372
SECOND FLOW — FINAL	350		358
SECOND CLOSED IN	366		374
THIRD FLOW — INITIAL			
THIRD FLOW — FINAL			
THIRD CLOSED IN			
FINAL HYDROSTATIC	381		388

TYPE OF TEST: Bottom Hole	TESTER: W. Wolodko — SAMPL. NO: 165
WITNESS: H. Bickell	DRILLING CONTRACTOR: Heath & Sherwood

EQUIPMENT AND WELL DATA

FORMATION TESTED: —	GAUGE DEPTH / TEMPERATURE: — TV MEAS / TV EST
NET PRODUCTIVE THICKNESS: — ft	MUD TYPE: Invermul
K.B. ELEVATION: 813	MUD WEIGHT: 7.9 — MUD VISC: 38
ALL DEPTHS MEASURED FROM: ☑ K.B. ☐ GROUND	CASING OR HOLE SIZE: 6 1/4
PACKER DEPTHS (TOP / BOTTOM): 1112	WATHOLE SIZE: N/A
DEPTH OF TESTER VALVE: 1072	DRILL PIPE (OD / WEIGHT): 4 1/2 — 9.5
CASING PERFORATED INTERVAL: N/A	DRILL COLLARS ABOVE TESTER (ID / LENGTH): 2" — 160
TOTAL DEPTH: 1222	SURFACE CHOKE: 3/4
AMOUNT AND TYPE CUSHION: Nil	BOTTOM CHOKE: 1/2

FLUID SAMPLER DATA

SAMPLER PRESSURE AT SURFACE _____ PSIG

RECOVERY: C.C. OIL _____ CU.FT. GAS _____

C.C. WATER _____

C.C. MUD _____

TOTAL LIQUID C.C. _____

SAMPLE SHIPPED TO LABORATORY: YES ☐ NO ☐

OIL GRAVITY _____ API @ _____ °F

GAS OIL RATIO _____ CU.FT./BBL.

	RESISTIVITY REFRACTOMETER OR OR READING	@ °F	CHLORIDE CONTENT
RECOVERY WATER			340 PPM
RECOVERY MUD FILTRATE			PPM
MUD PIT SAMPLE FILTRATE			PPM

TIME PERIODS

	FIRST	SECOND	THIRD		AM	PM
FLOW	5	45		TESTER OPENED		11:25
CLOSED IN	30	60		PACKER UNSEATED	1:45	

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
600	Drilling Mud
30	Water
630	TOTAL LIQUID RECOVERY

GAS FLOW RATE DATA

TYPE OF INSTRUMENT: ☐ CRITICAL FLOW PROVER ☐ PITOT TUBE ☐ ORIFICE WELL TESTER ☐ BOB STATIC

FLOW TIME	INSTRUMENT PRESSURE: WATER	MERC	PSI	ORIFICE SIZE	GAS TEMP	GAS RATE MCF/D @ 60°F

REMARKS: Tool open with good air blow. Good air blow decreasing and dying in 35 min. of second flow.

COMPANY: CANEX DEVELOPMENT

LEASE DESIGNATION: 03 52W 60.03 124 10W 15.07

FIELD OR TERRITORY: N.W.T.

FORMATION TEST NO.: 1

FORMATION: BASEMENT RIVER

WELL NAME AND NUMBER: CANEX et al BASEMENT N-43-A

TESTED INTERVAL: 1112-1222

FORM 2048 5C

NOMENCLATURE

AOF — absolute open flow potential, MCFD

AOF_t — theoretical absolute open flow potential if damage were removed, MCFD

B — formation volume factor, res bbl/ST bbl

c — compressibility, psi^{-1}

D — gauge depth from KB, ft

DR — damage ratio, dimensionless

E — KB elevation, ft

F — drill pipe capacity, bbl/ft

G — hydrostatic gradient of recovery fluid, psi/ft

h — net productive thickness of formation, ft

h^1 — thickness of test interval, ft

k — average effective permeability, md

k' — estimated average effective permeability, md

m — slope of final CIP buildup plot, psig/cycle ($psig^2$/cycle for gas)

M — slope of flow plot, min^{-1}

P_D — average pressure drop across damaged zone during flow, psig

P_r — reservoir pressure, psig

P_w — wellbore flow pressure, psig

$\bar{P}$ — weighted average wellbore flow pressure, psig

PI — productivity index, bbl/day·psi

PI_t — theoretical productivity index if damage were removed, bbl/day·psi

PS — potentiometric surface, fresh water corrected to 100°F, ft

Q — average liquid production rate during test, bbl/day

Q_g — measured gas production rate, MCFD at 60°F, 14.4 psia, sp. gr. 0.60

Q_m — maximum production rate, U.S. gal/min

Q_{mt} — maximum theoretical production rate if damage were removed, U.S. gal/min

q — flow rate calculated from hydrostatic of recovery, psi/[illegible] min

r — radius of investigation, ft

r_w — wellbore or shaft radius, ft

R_s — solution gas-oil ratio, MCFD/ST bbl

S — fluid saturation, fraction

t — effective flow time, min

t_i — time interval from start of continuous production to some future point of interest, min

T — reservoir temperature, °R

μ — viscosity, cp

x — time increment during which q values are calculated, min

Z — compressibility factor, dimensionless

ϕ — porosity, fraction

θ — time point during the closed-in period, minutes

Subscripts

g — gas

o — oil

w — water

t — total

CANDEX AT AL PARADISO N-43

26-1-71 Hole was plugged on the 14th January 1971

Rig was never released

From Mrs. Smith, LIAH, 26-1-71 VAH

CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

Company: Candex Development Limited — Page: 1 of 2

Well: Candex et al Dahadinni M-41A — File: 933-11115

Field: Dahadinni River Area, N.W.T. — Analyst: LK

Location: 63 52' 59.03 N.L. 124 39' 15.07 W.L. — Elevation: K.B. ____ Grd. 813'

Formation: ____ Depth: ____

Sampled from: DST #2 (Misrun) — by: ____

Sampling pressure: ____ psig — Sampling temp.: ____ °F — Ambient temp.: ____ °F

Date sampled: ____ — Date received: Sept. 15/71 — Date analysed: Sept. 20/71

Container pressure: ____ — Mud: ____ — Water cushion: ____

Recovery or flowrate: ____

MUD FILTRATE ANALYSIS

Resistivity 0.75 Ohm-meters @ 72°F

Chloride 2220 mg/liter

CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS

File 933-11115 2 of 2

Company: Candex Development Limited

Well: Candex et al Dahadinni M-43A K.B. _____ Grd. 813'

Location: 63 52' 59.03 N.L. 124 39' 15.07 W.L. Field: Dahadinni River Area Province: N.W.T.

Formation: _____ Interval: 9731' - 10,013'

Sampled from: DST #3 (Top of Tool) by: _____

Date sampled: _____ Date analysed: Sept. 20/71 Analyst: LK

Recovery: 8870' Liquid

_____ Mud type: _____ Water cushion: _____

Resistivity: 0.10 Ohm meters @ 73 °F

Specific gravity: 1.0542 @ 60°F

pH: 7.3 H_2S: Absent

Refractive Index: 1.3462 @ 71°F

Total Solids:

Calculated: 77,075 mg/liter

By evaporation @ 110°C: - mg/liter

By evaporation @ 180°C: - mg/liter

At ignition: - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO_3	SO_4	CO_3	OH
27991	1818	141	Pres.	Abs.	-	-	46011	322	792	Nil	Nil

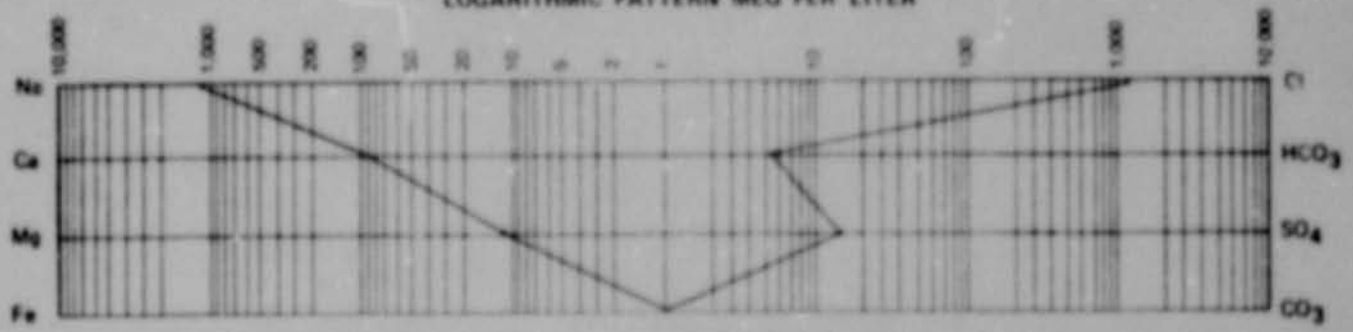
PER CENT CALCULATED SOLIDS

36.3	2.4	.2	Pres.	Abs.	-	-	59.7	.4	1.0	.0	.0

MEQ PER LITER

1217.0	90.7	11.6	Pres.	Abs.	-	-	1297.5	5.3	16.5	.0	.0

LOGARITHMIC PATTERN MEQ PER LITER



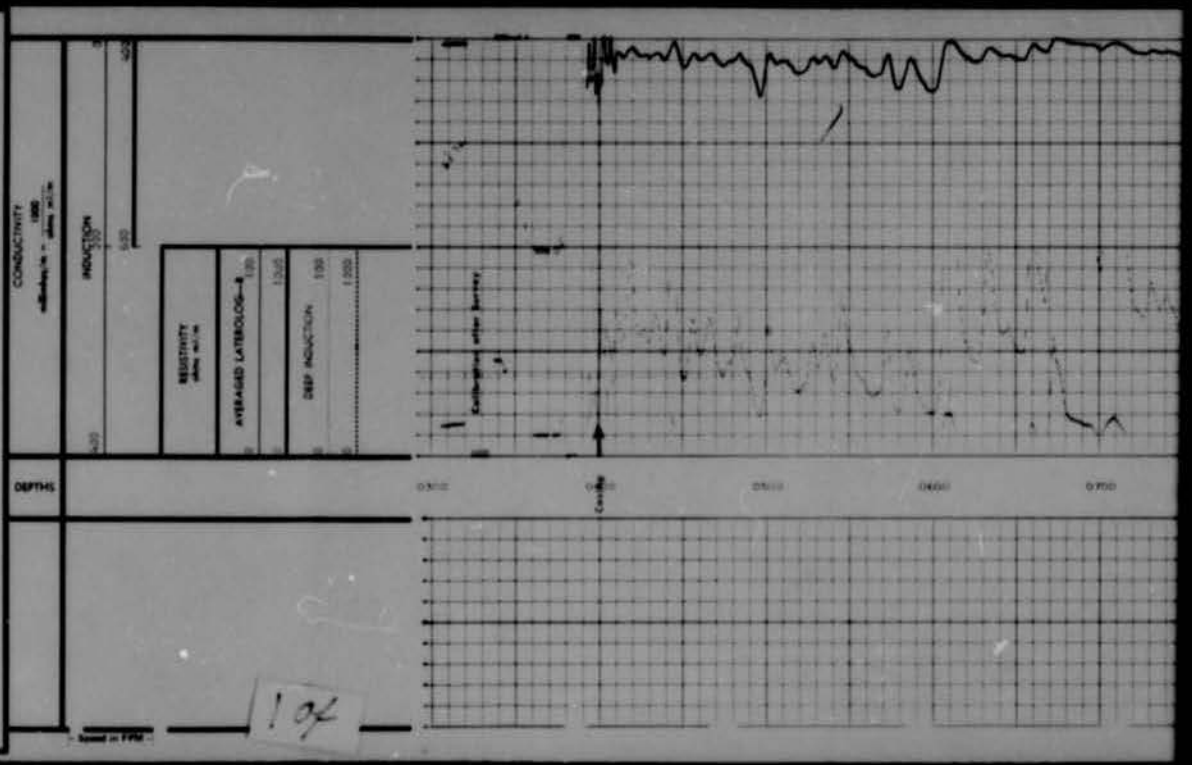
76494, 27991.0

SCHLUMBERGER DUAL INDUCTION LATEROLOG

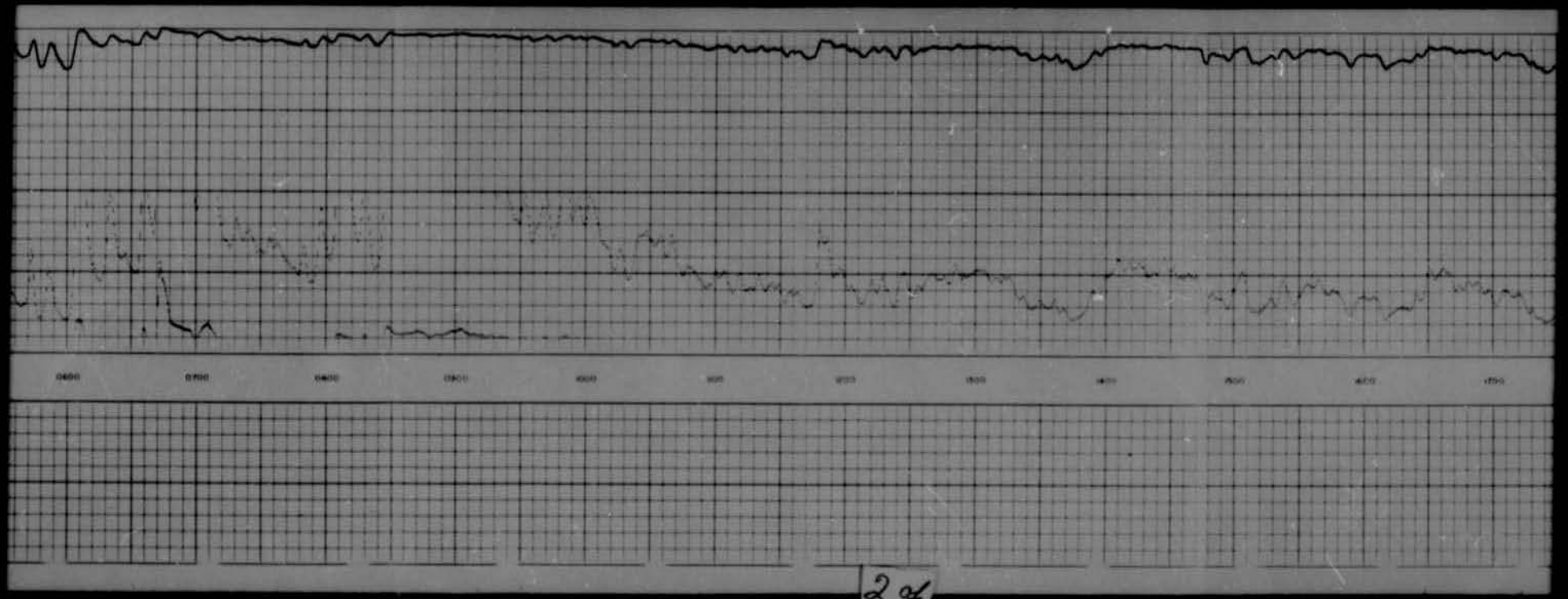
COMPANY	CAMBER DEVELOPMENT LIMITED
WELL	CAMBER ET AL BANSHEE H-43A
FIELD	WILDCAT
PROVINCE	NORTHWEST TERRITORIES
LOCATION	63° 52' 59.3" N LAT 134° 39' 15.7" W LONG
Other Services	CALIPER [illegible]
Permanent Datum	GL Elev. 813
Log Measured From	KB 9' Above Perm. Datum
Elev.	KB 822 GL 813 DF

Run No.	ONE			
First Reading	5698			
Last Reading	400			
Depth Driller	5701			
Depth Logger	5703			
Bottom Log Int.	5700			
Top Log Int.	400			
Casing Driller	402			
Casing Logger	INVERMUL			
Bit Size	9.7 43			
Type Fluid in Hole	-			
Density	3.8			
Viscosity	-			
Fluid Loss	-			
Source of Sample	-			
Rm @ Meas. Temp.	-			
Rmf @ Meas. Temp.	-			
Rmc @ Meas. Temp.	-			
Source Rmf / Rmc	-			
Rm @ BHT	-			
Time Since Circulation	6 1/4"			
Max. Rec. Temp.	3.5 HRS			
Equipment No.	DSU-4-5, REM.			
Recorded By	JOHNSON			
Witnessed By	BICKELL			

ELEV. BASE MSL. THEREFORE NO SP OR LL-8 IS RECORDED

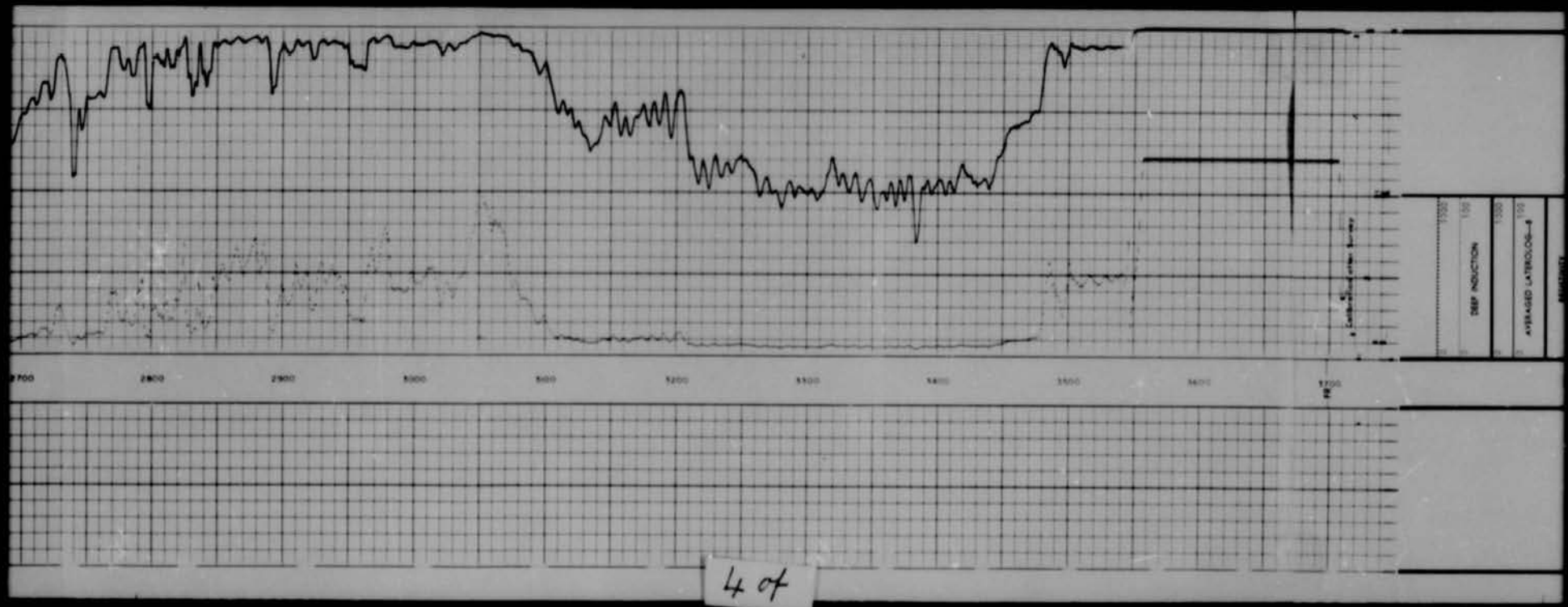


104

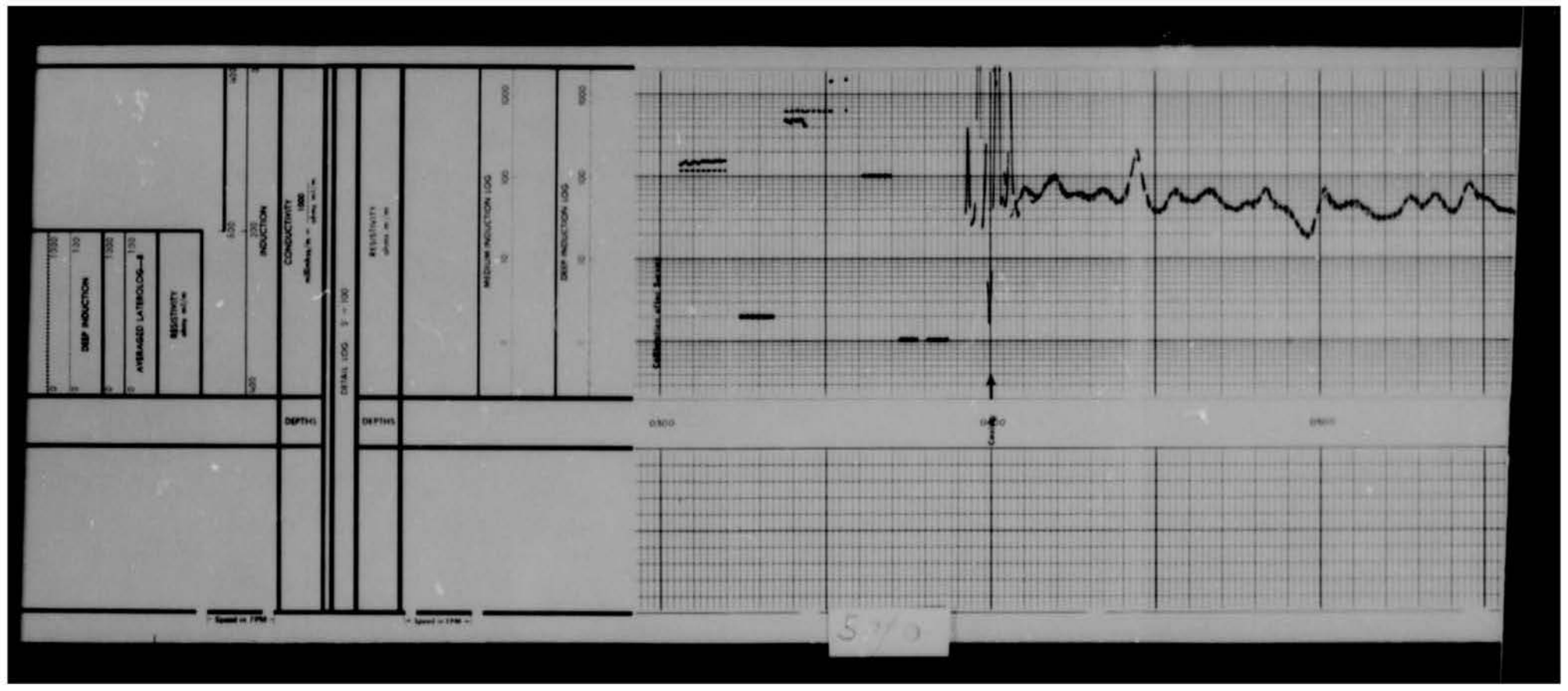


24


1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
307

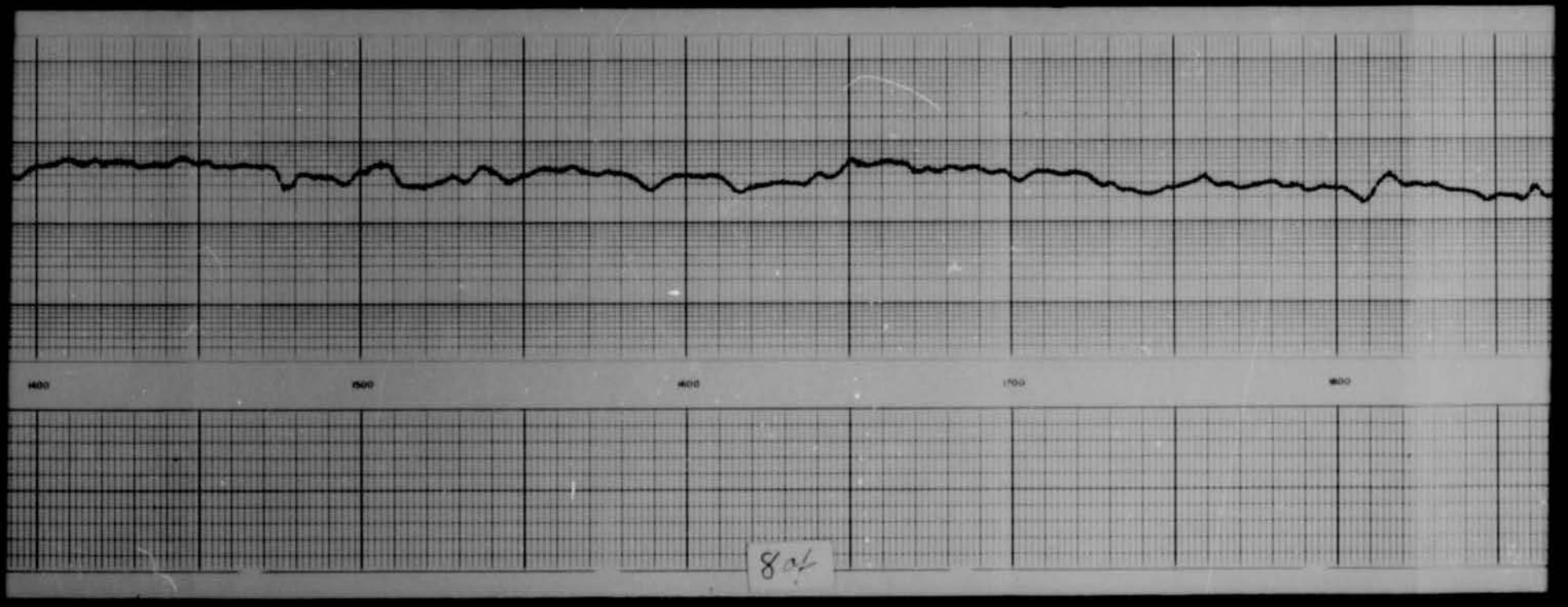

2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
DEEP INDUCTION
AVERAGED LATEROLOG-8

4 of


DEEP INDUCTION
AVERAGED LATEROLOG-8
RESISTIVITY
INDUCTION
CONDUCTIVITY
DEPTHS
DETAIL LOG
RESISTIVITY
MEDIUM INDUCTION LOG
DEEP INDUCTION LOG
Speed in FPM
Speed in FPM
0300
0400
0500
5370


0600
0700
0800
0900
1000
64

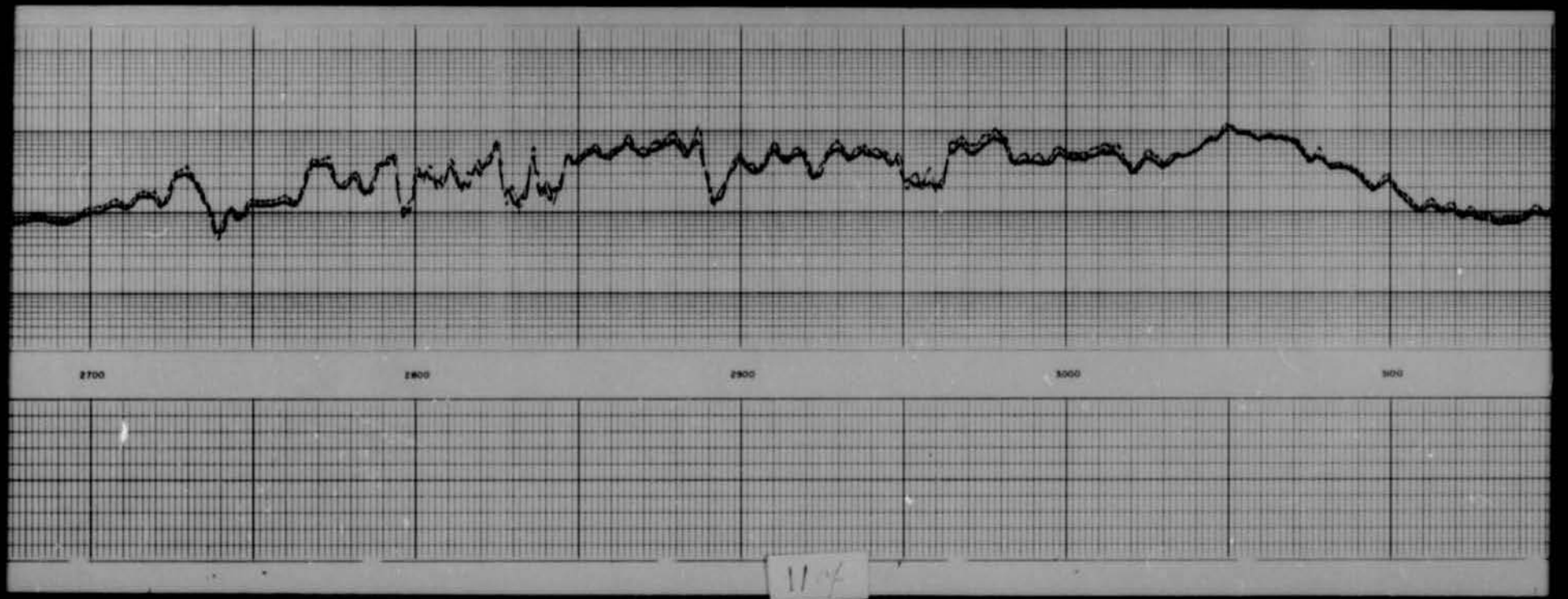

600
800
1000
1200
1400
7 of


1400
1500
1600
1700
1800
84

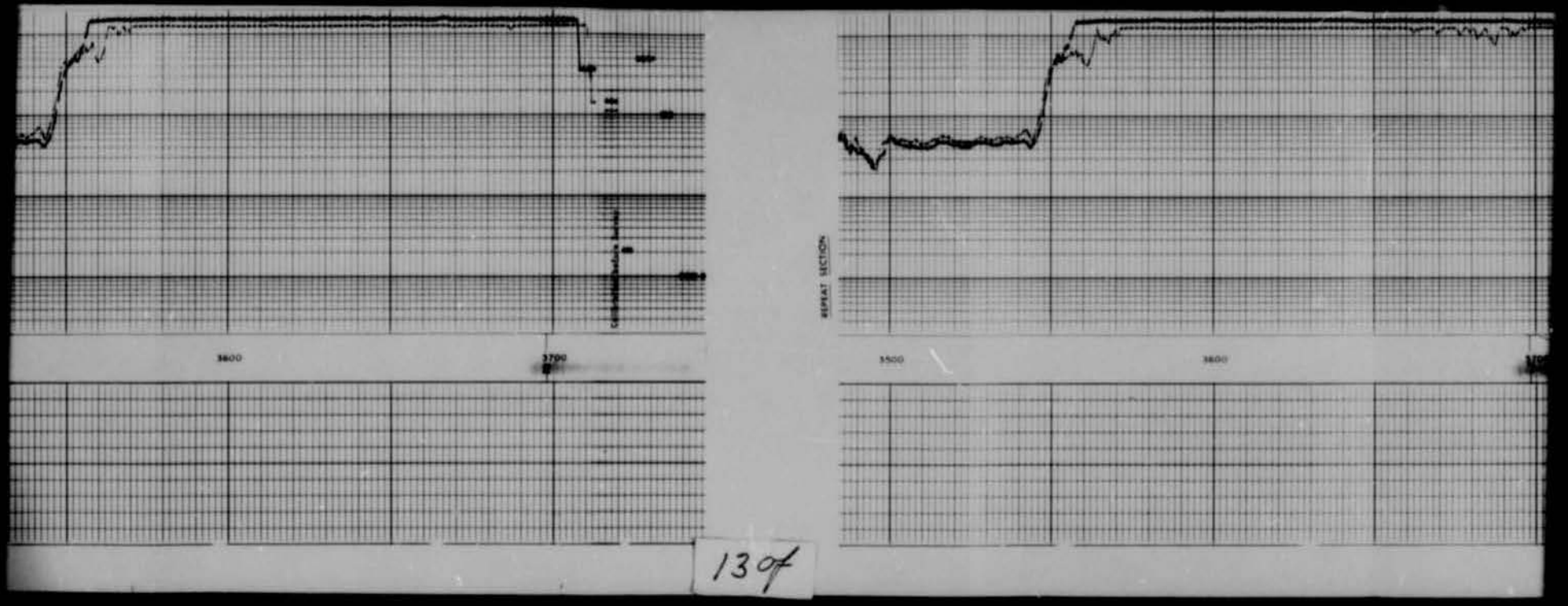
9 of 2


1900
2000
2100
9of-2


2300
2400
2500
2600
2700
10 of


2700
2800
2900
3000
3100
114


3200
3300
3400
3500
12 of



13 of

REPEAT SECTION
3500
3600
DEEP INDUCTION LOG
MEDIUM INDUCTION LOG
RESISTIVITY
DEPTHS
SCHLUMBERGER
COMPANY
WELL
FIELD
PROVINCE

14 of 14

SCHLUMBERGER INDUCTION ELECTRICAL LOG

COMPANY CAMBEX DEVELOPMENT LIMITED

WELL CAMBEX ET AL BANDIMIRI H-45A

FIELD KELGAT

PROVINCE NORTHWEST TERRITORIES

LOCATION 63° 53' 55.7" N LAT
135° 29' 15.7" W LONG

Permanent Datum GL Elev. 813
Log Measured From KB 9 ft. Above Perm. Datum

Elev. Derrick Floor KB 822
Elev. Ground 813

Date	14 AUG 71		
Run No.	ONE		
Depth-Driller	10620		
Depth-Logger	10620		
Bottom Logged Interval	10613		
Top Log Interval	1300		
Casing-Driller	1300		
Casing-Logger	1300		
Bit Size	8 1/2"		
Type Fluid in Hole	POLYMER		
Density	8.7		
Viscosity	52		
pH			
Fluid Loss			
Source of Sample			
Rm @ Meas. Temp.	0.202 @ 55	@	@
Rmf @ Meas. Temp.	@	@	@
Rmc @ Meas. Temp.	0.202 @ 55	@	@
Source Rmf / Rmc			
Rm @ BHT	0.120 @		
Time Since Circ.	10		
Max. Rec. Temp.	55 °C	55 °C	55 °C
Equipment Location	EDM-40	EDM-40	EDM-40
Recorded By			
Witnessed By			

Run No. ONE

Date 14 AUG 71

Time Started

Time Finished

Cementing Company

Casing Tester

Casing Shoe

Cementing Method

Cement Volume

Cement Type

Cement Additives

Cement Top

Cement Bottom

Casing Shoe Depth

Casing Shoe Type

Casing Shoe Size

Equipment Used

Operating Time

Equipment Rating

Equipment Serial No.

Equipment Type

Equipment Location

Recorded By

Witnessed By

Comments

CONDUCTIVITY millimhos/m 1000 — 0

INDUCTION 200 — 100

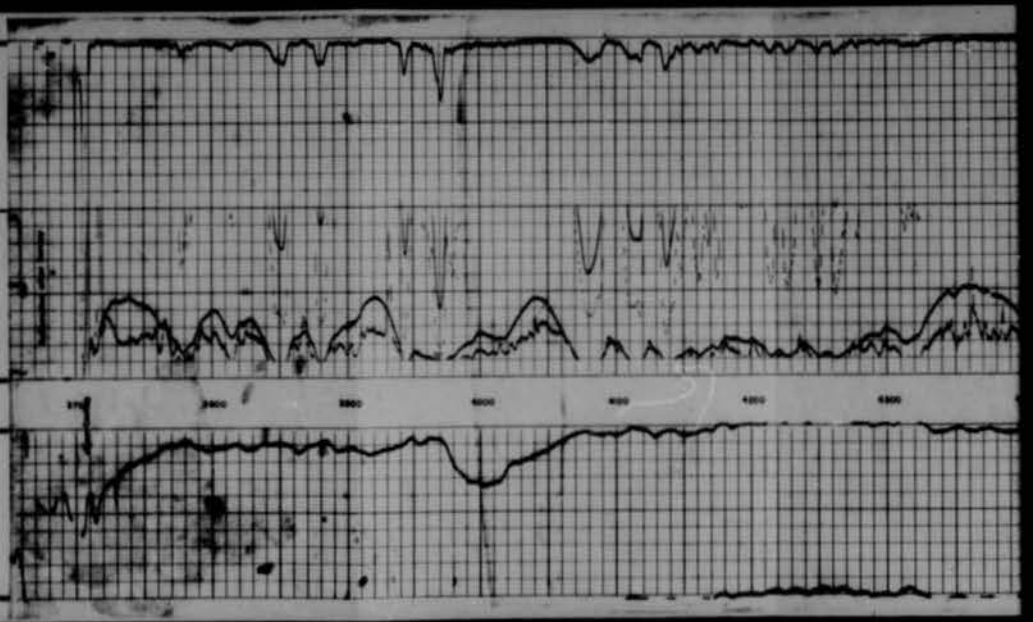
RESISTIVITY ohms m²/m

16" NORMAL 100 — 1000

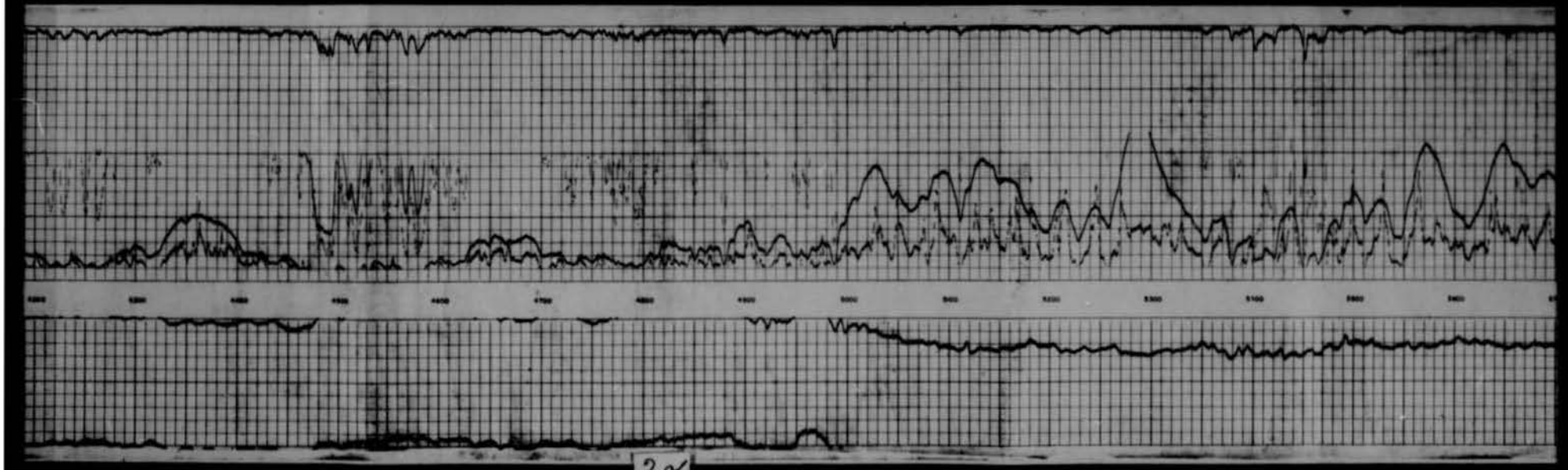
INDUCTION 100 — 1000

DEPTH

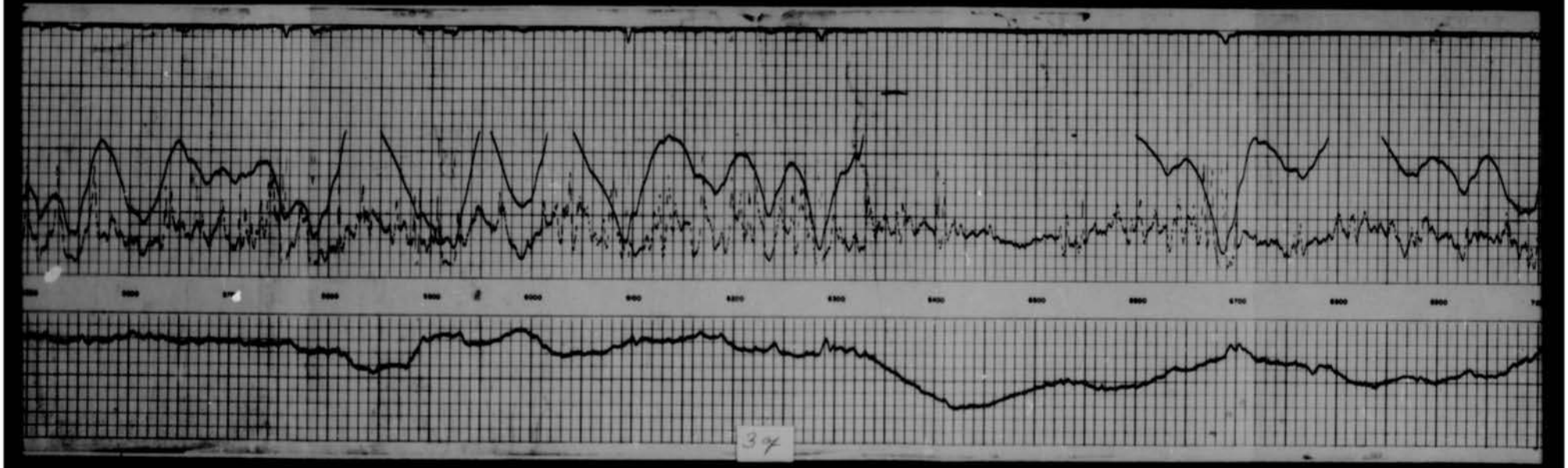
SPONTANEOUS POTENTIAL millivolts

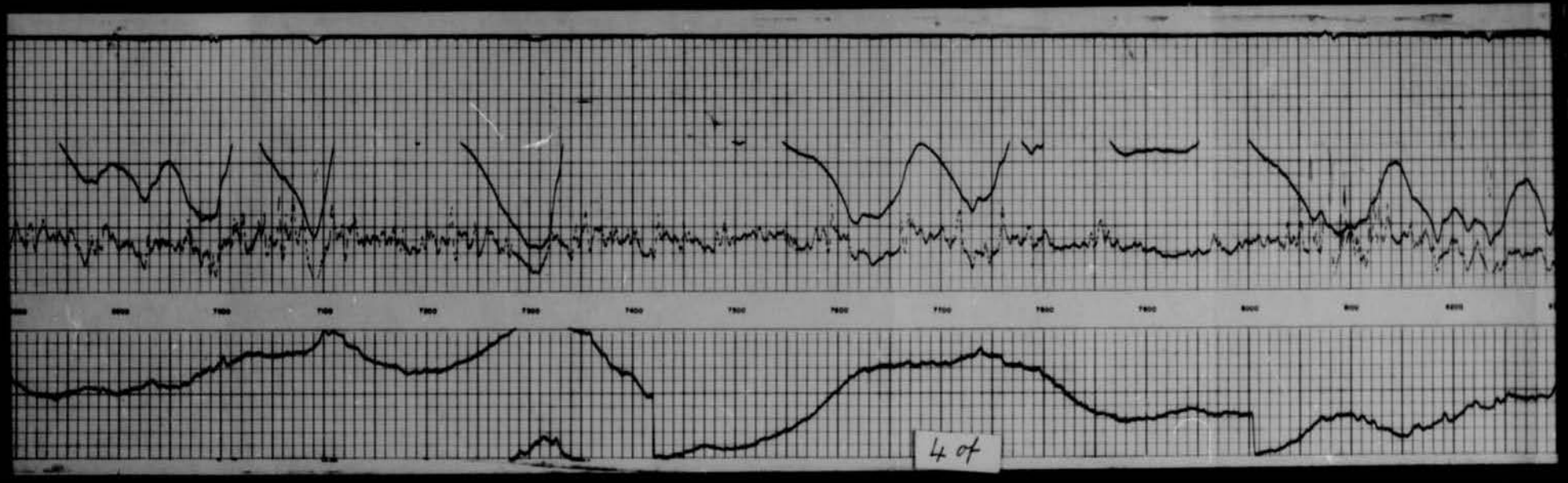


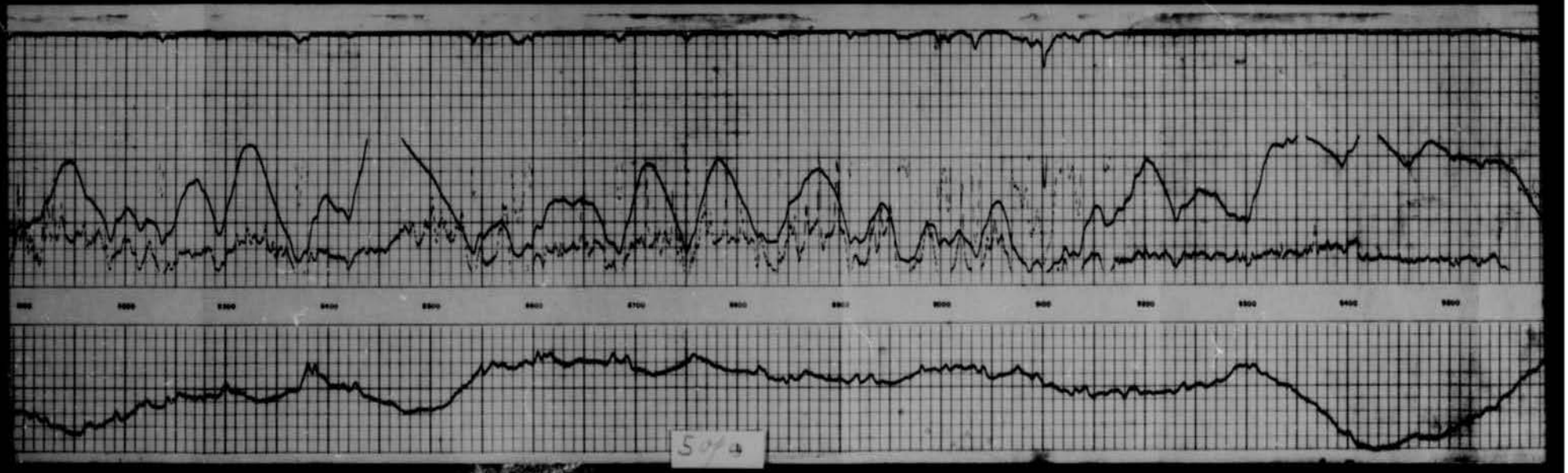
1 of

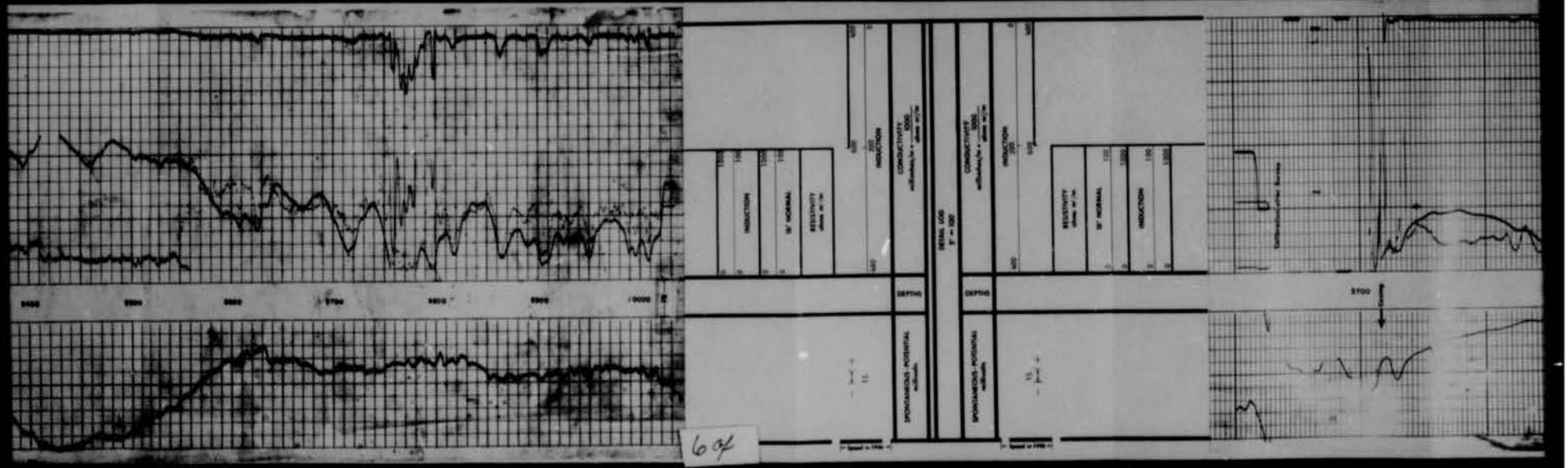


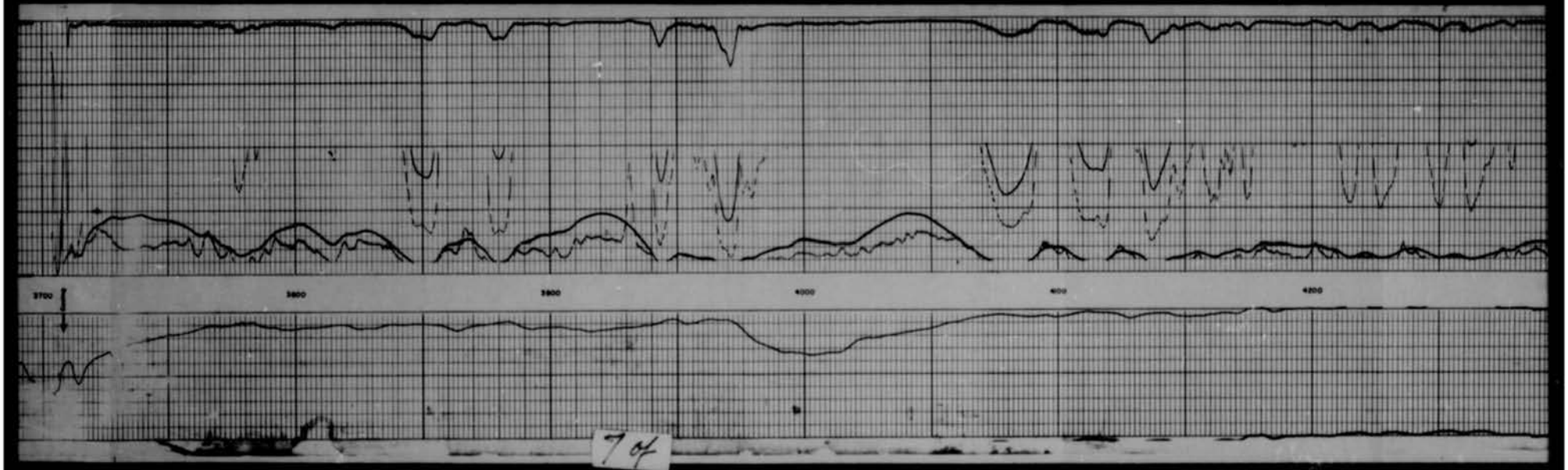
24

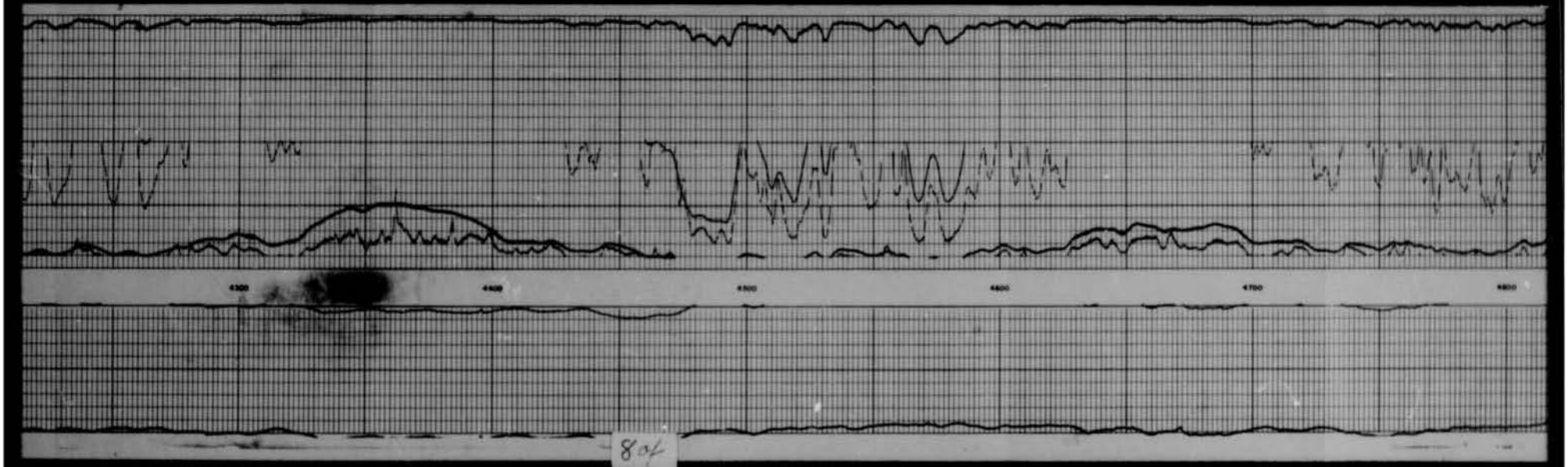

3 ✗


4 of


5 of 5

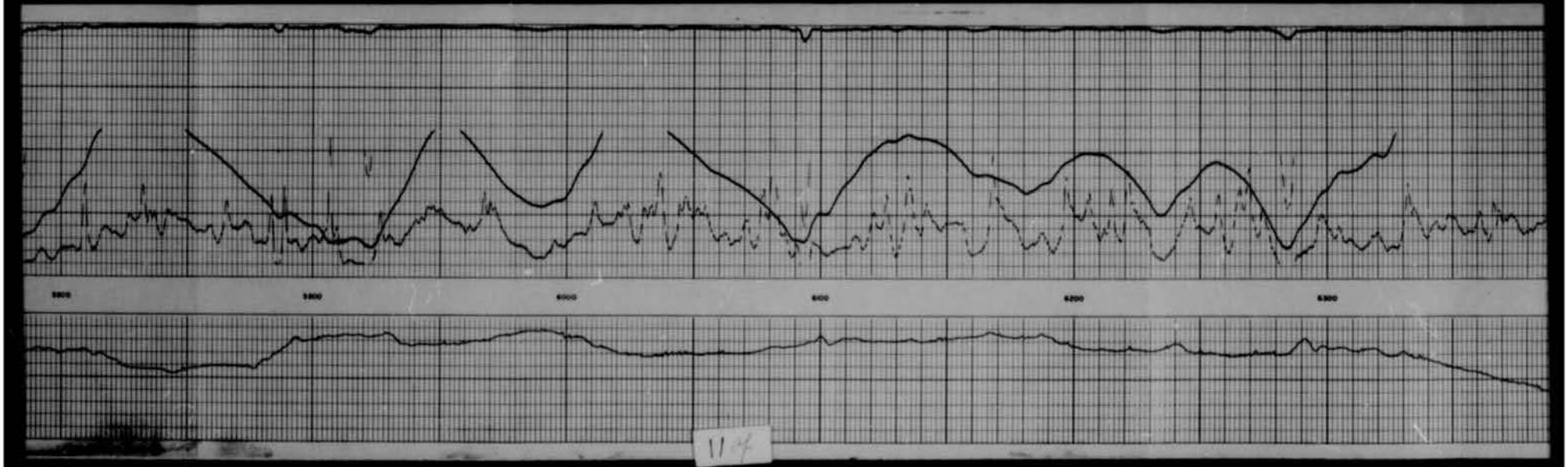

INDUCTION
16" NORMAL
RESISTIVITY
CONDUCTIVITY
DEPTHS
SPONTANEOUS POTENTIAL
DETAIL LOG
3700
64

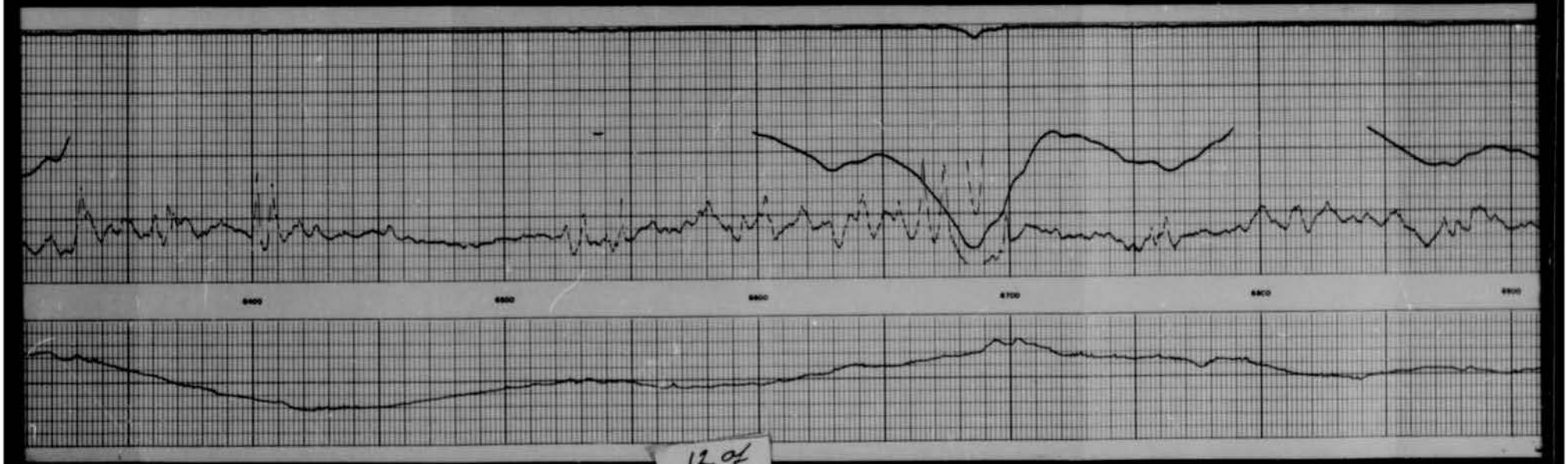

3700
3800
3900
4000
4100
4200
7 of


4300
4400
4500
4600
4700
4800
8of


4800
4900
5000
5100
5200
5300
9a/a

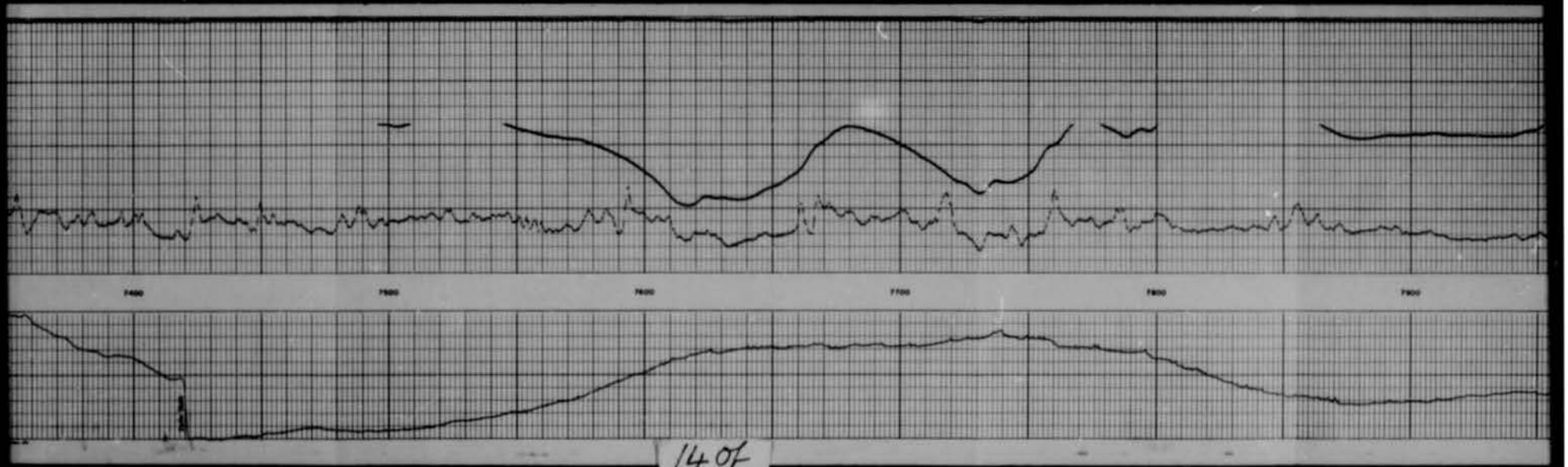

5300
5400
5500
5600
5700
5800
10 of


5900
5800
6000
6100
6200
6300
114

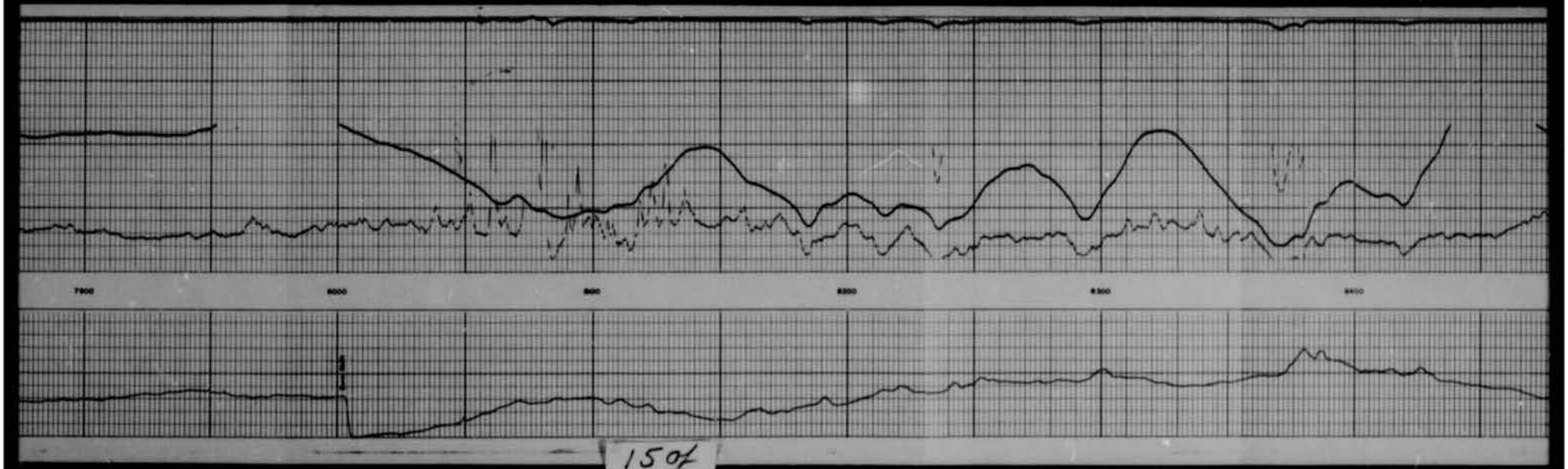


12 of

13 of

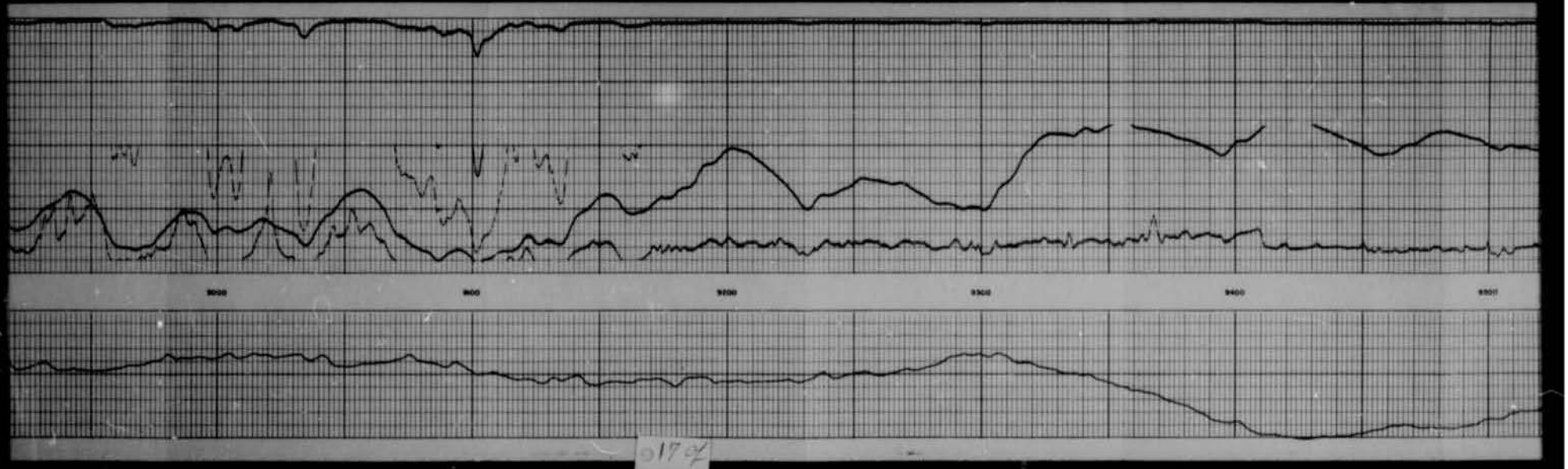


14 of

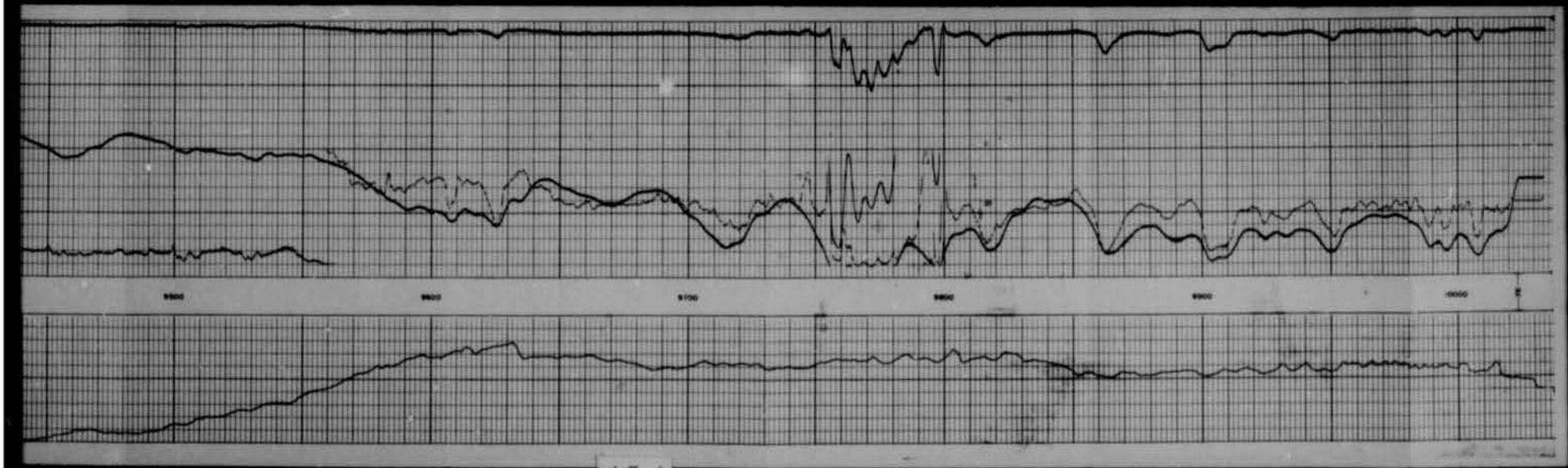


15 of

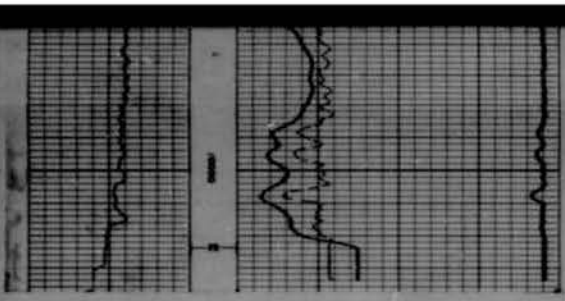
16 of



17

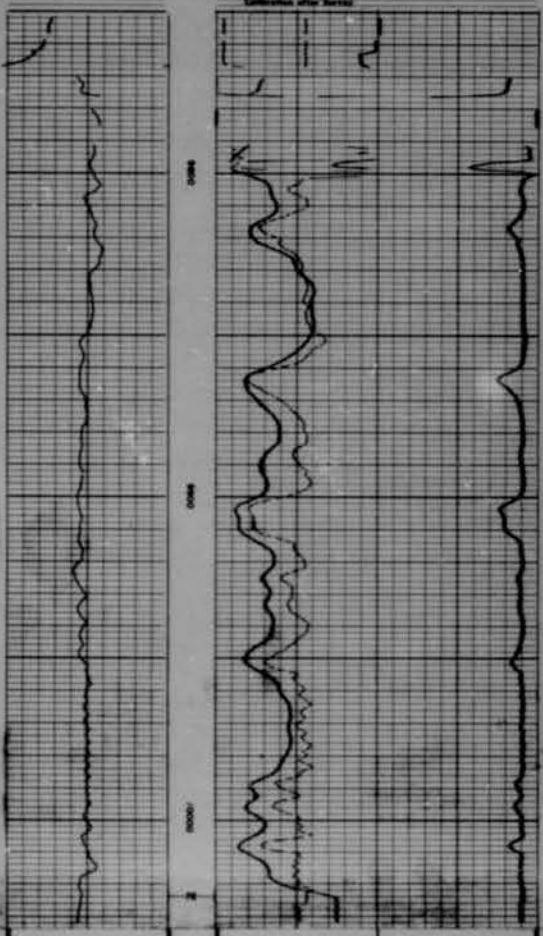


1804



REPEAT SECTION

Calibration after Survey



19919

SPONTANEOUS POTENTIAL millivolts	CONDUCTIVITY 1000 millimhos/m = ohmm
	INDUCTION 0 1000 / 0 100
	16" NORMAL 0 1000 / 0 100
	RESISTIVITY ohmm m²/m
	600 INDUCTION 400

COMPANY: CANREX DEVELOPMENT LIMITED

WELL: CANREX ET AL SANDERSON Hodgson

FIELD: WILDCAT PROVINCE: NORTHWEST TERRITORIES

SCHLUMBERGER

SCHLUMBERGER GAMMA RAY NEUTRON LOG

COMPANY: CANBEX DEVELOPMENT LIMITED

WELL: CANBEX ET AL SAHASINNI M-43A

FIELD: WILDCAT

PROVINCE: NORTHWEST TERRITORIES

LOCATION: 63° 53' 55.3" N LAT 130° 38' 13.3" W LONG

Other Services: LAT,FDC,DIL,SLC-GR

Permanent Datum: GL Elev. 813

Log Measured From: KB 9 Ft Above Perm. Datum

Elev.: K.B. 822 GL 813 CM

Date	15 AUG 71		
Run No.	ONE		
Depth-Driller	10036		
Depth-Logger	1797		
Bottom Logged Interval	6312		
Top Logged Interval	10036		
Casing-Driller	10011		
Casing-Logger	PULLED		
Bit Size	8 7/8	7 7/8	
Type Fluid in Hole	-		
Dens.	-		
Visc.	8.8#	55	
pH	-		
Fluid Loss	9.2ml	55	
Source of Sample	-		
Rm @ Meas. Temp.	4 1/2		
Rmf @ Meas. Temp.	-		
Rmc @ Meas. Temp.	-		
Source: Rmf / Rmc	-		
Rm @ BHT	-		
Max. Rec. Temp. °F	14		
Equipment Number	6 HRD		
Location	BRH-AL BRH		
Recorded By	HUTCHOB		
Witnessed By	KAMAR		

Run at Number: 1

Depth Driller: 10036 Depth Logger: 1797

Bottom Logged Interval: 6312 Top Logged Interval: 10036

Casing Driller: 10011 Casing Logger: PULLED

Bit Size: 8 7/8 7 7/8

Type Fluid in Hole: Dens.: Visc.:

pH: Fluid Loss:

Source of Sample: Rm @ Meas. Temp.:

Rmf @ Meas. Temp.: Rmc @ Meas. Temp.:

Source: Rmf / Rmc: Rm @ BHT:

Max. Rec. Temp. °F: Equipment Number:

Location: Recorded By:

Witnessed By:

Time Since Circ.: 36hs

Time Logger at Bottom: 3:30 Date: 15/8/71

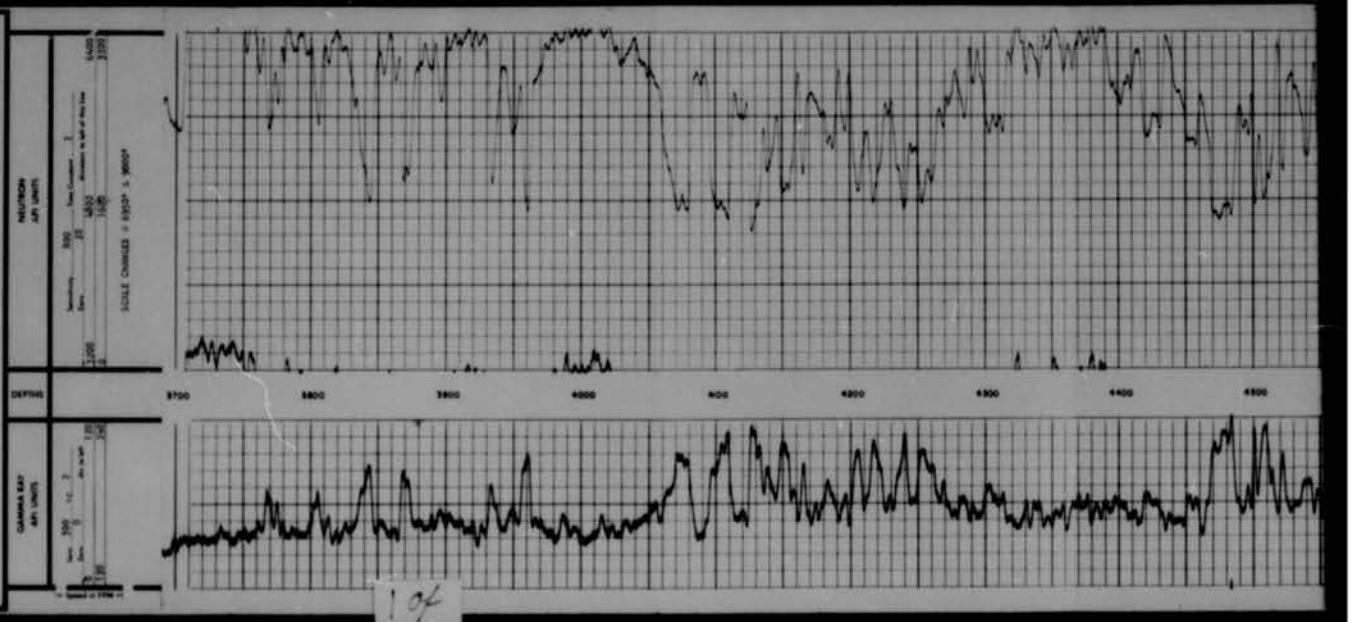
Equipment Number: 3F2-B 1 TAB

Recorded By: Witnessed By:

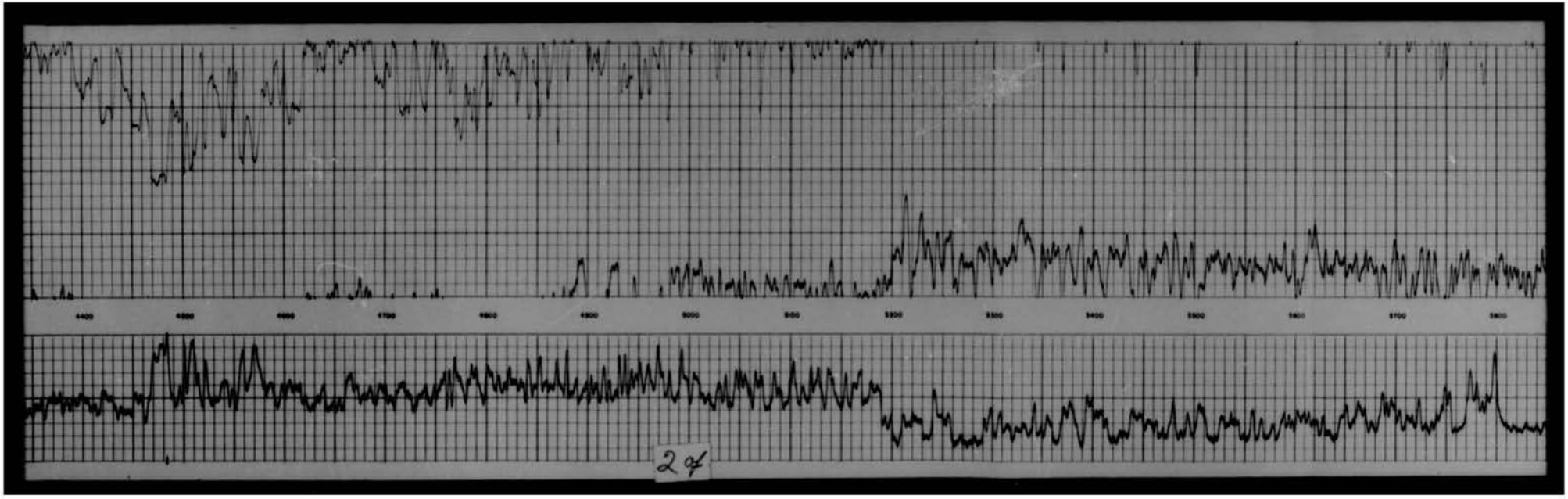
Equipment Number: Location:

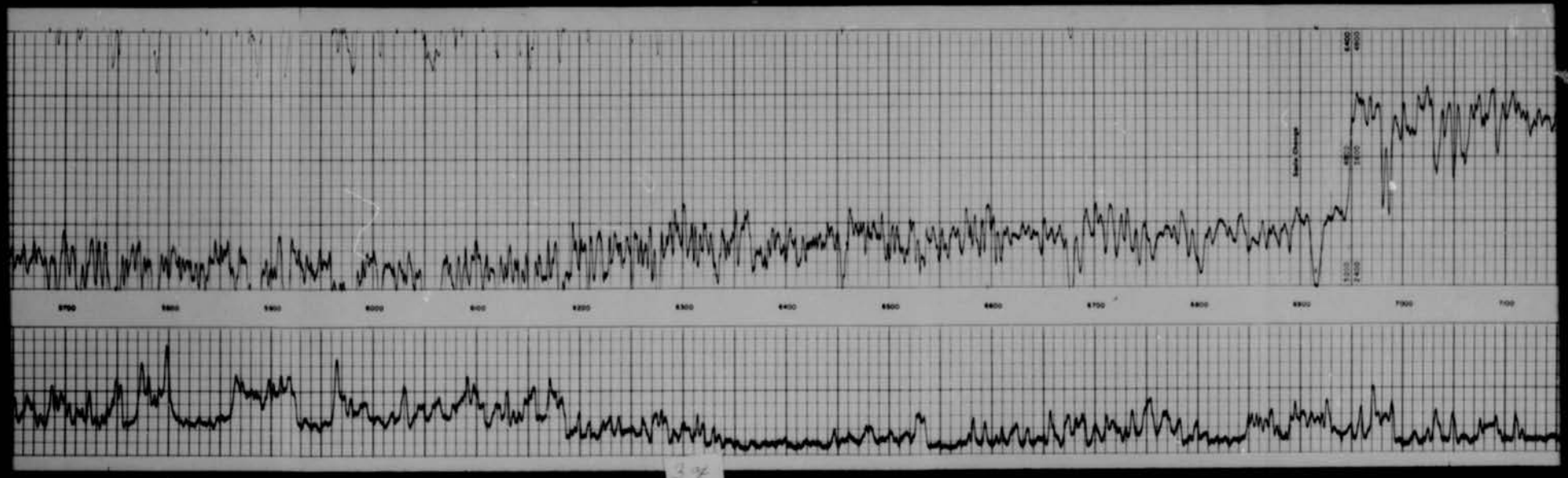
Run No. Service Order No. Depth Driller Depth Logger Bottom Logged Interval Top Logged Interval Casing Driller Casing Logger Bit Size Type Fluid in Hole Dens. Visc. Max. Rec. Temp. °F Equipment Number Location Recorded By Witnessed By

Run No.	Service Order No.	Depth Driller	Depth Logger	Bottom Logged Interval	Top Logged Interval	Casing Driller	Casing Logger	Bit Size	Type Fluid in Hole	Dens.	Visc.	Max. Rec. Temp. °F	Equipment Number	Location	Recorded By	Witnessed By
ONE	3F2-B 1 TAB	10036	1797	6312	10036	10011	PULLED	8 7/8	7 7/8	8.8#	55	14	6 HRD	BRH-AL BRH	HUTCHOB	KAMAR

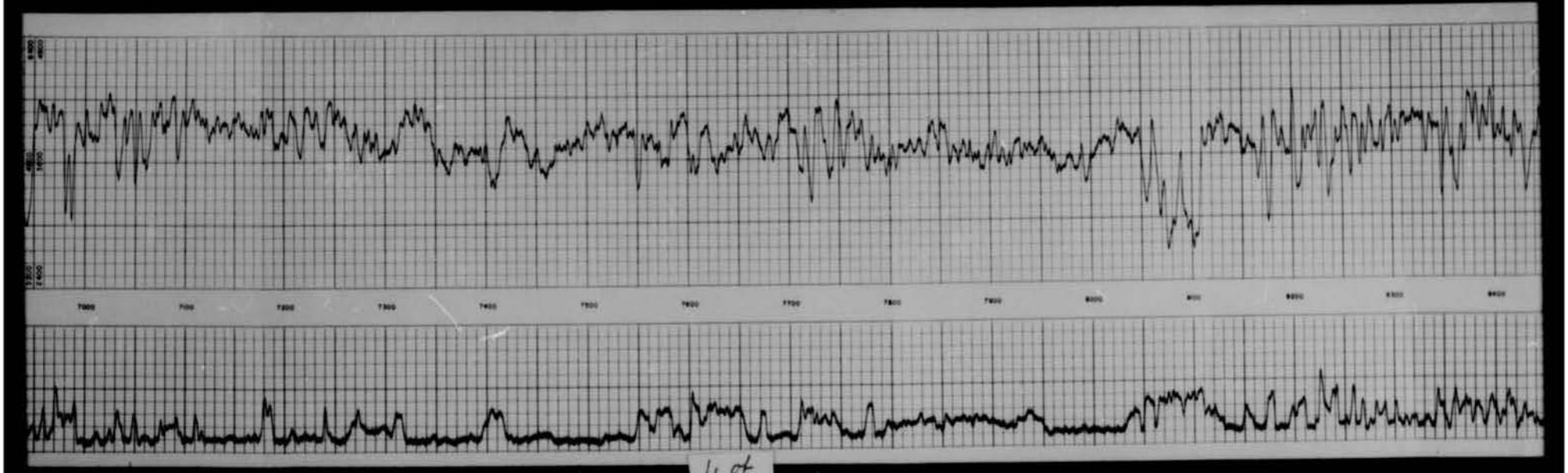


104

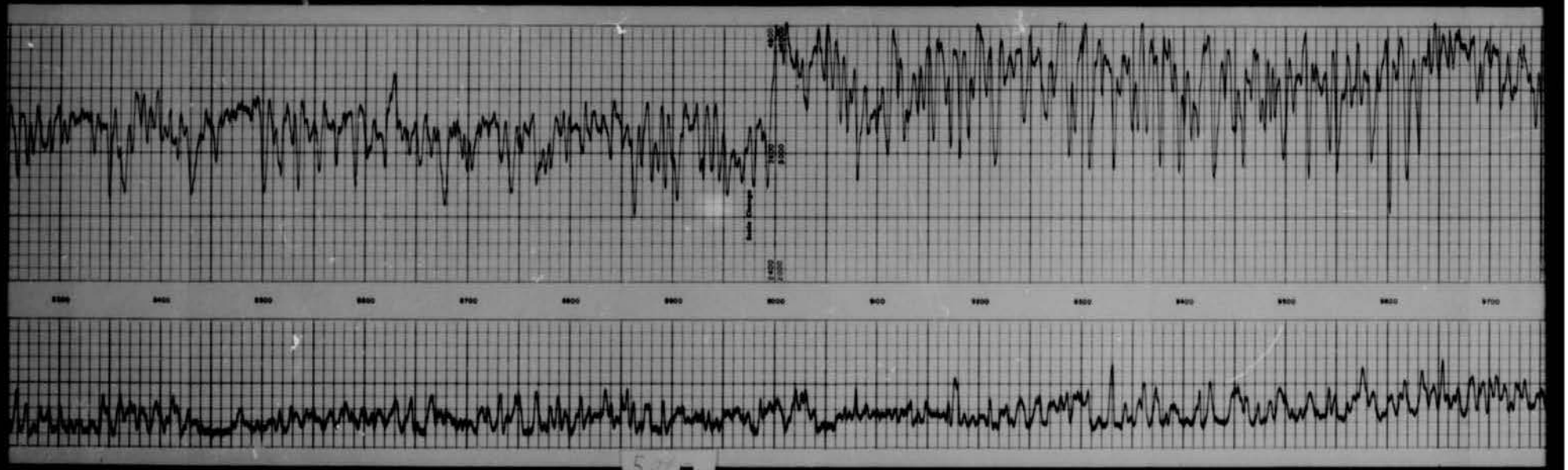

4400
4300
4200
4100
4000
3900
3800
3700
3600
3500
3400
3300
3200
3100
3000
2 of

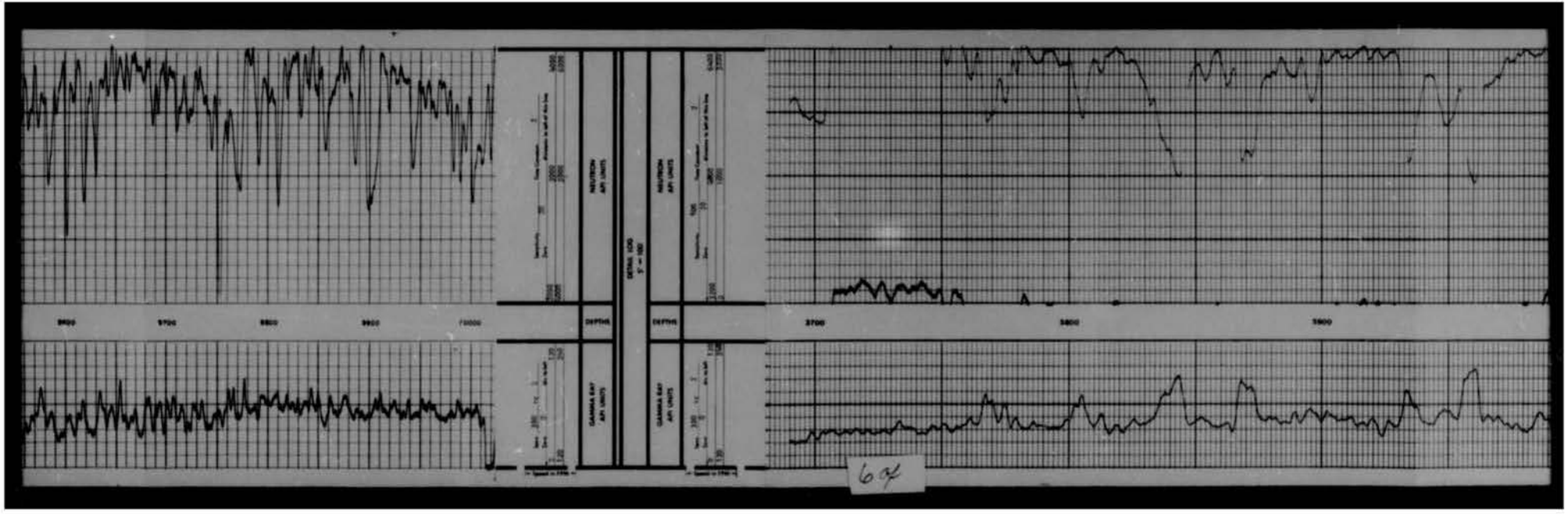

5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
Lock Change
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400

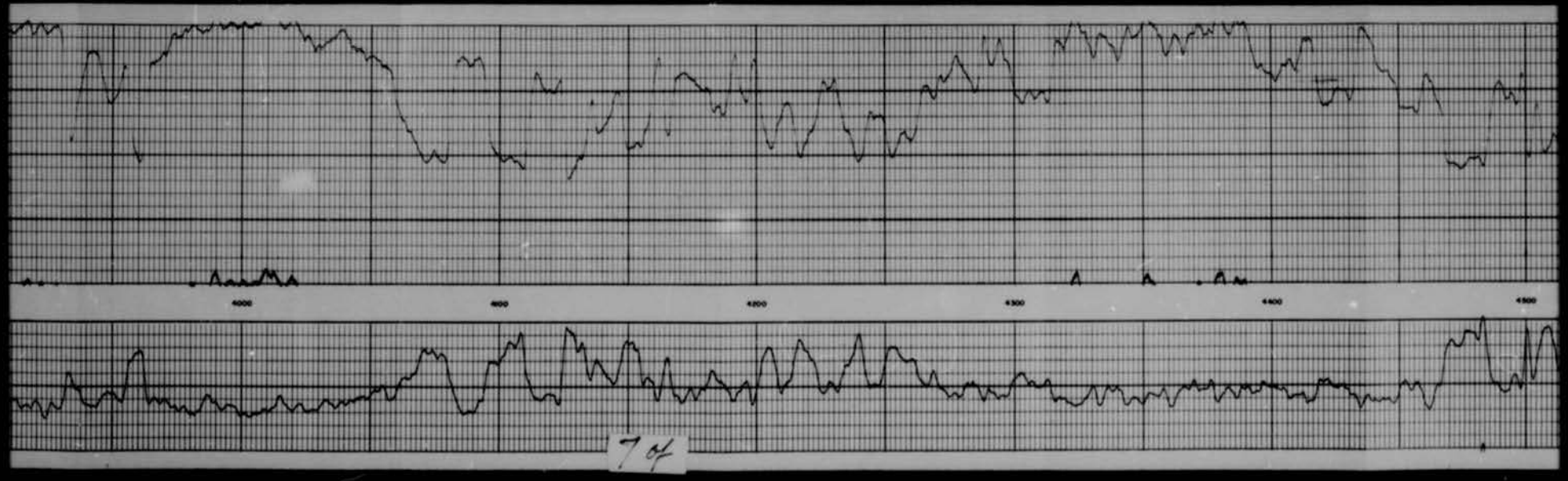
37

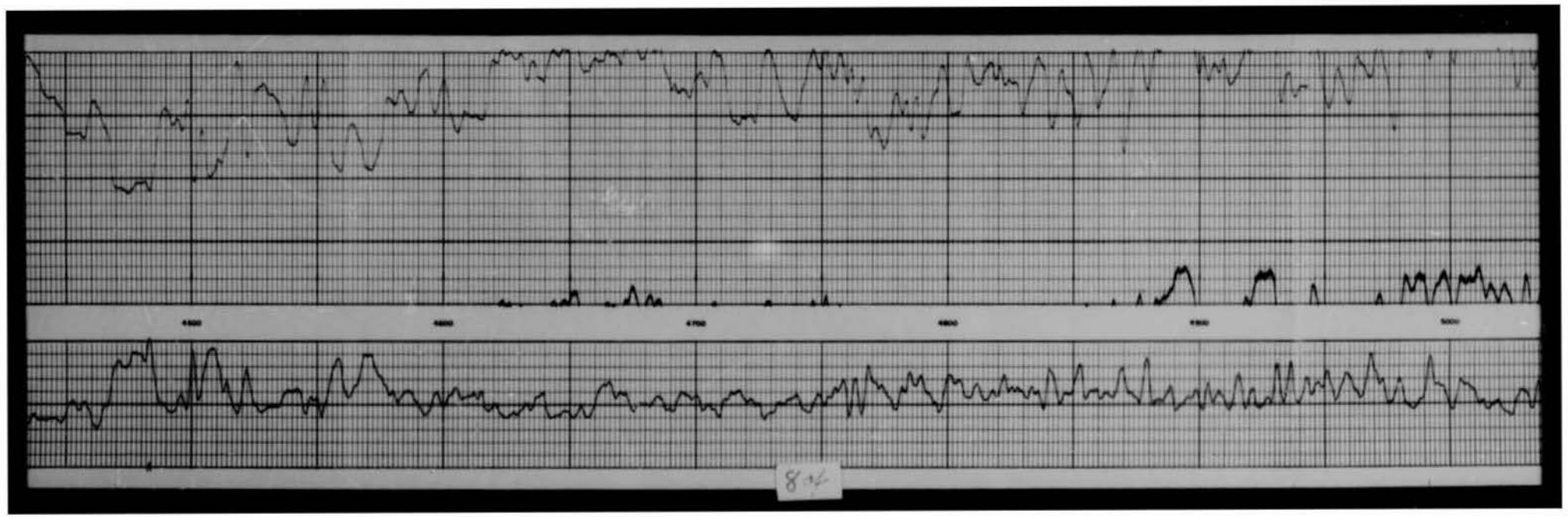


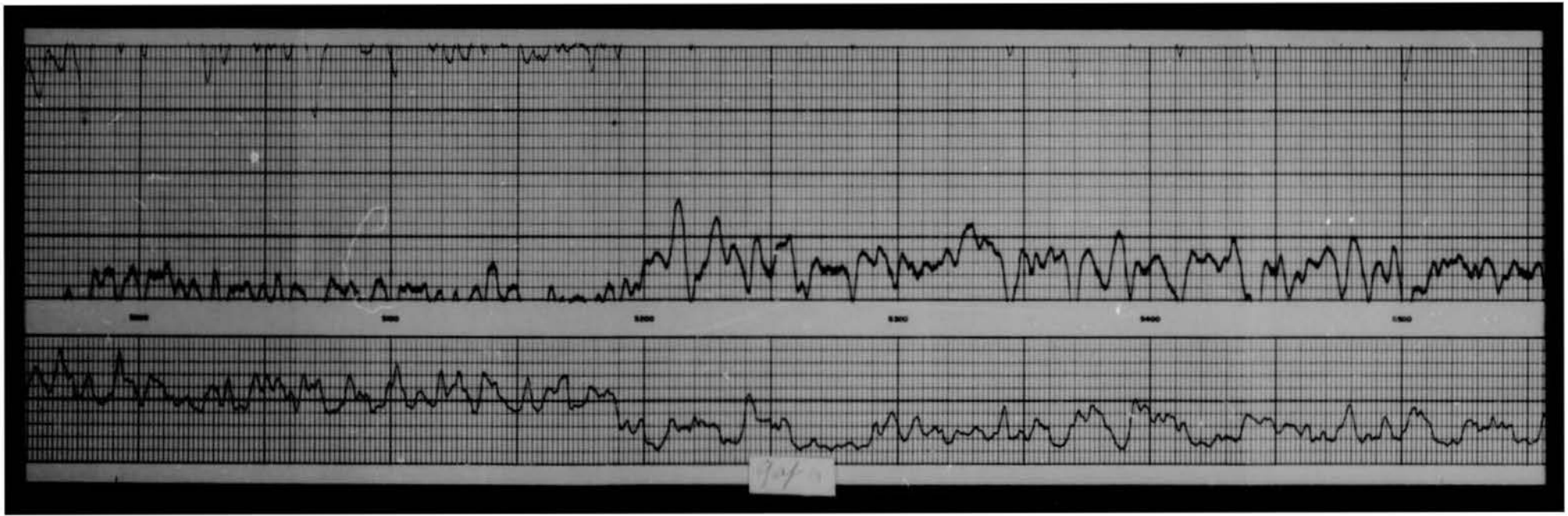
4 of

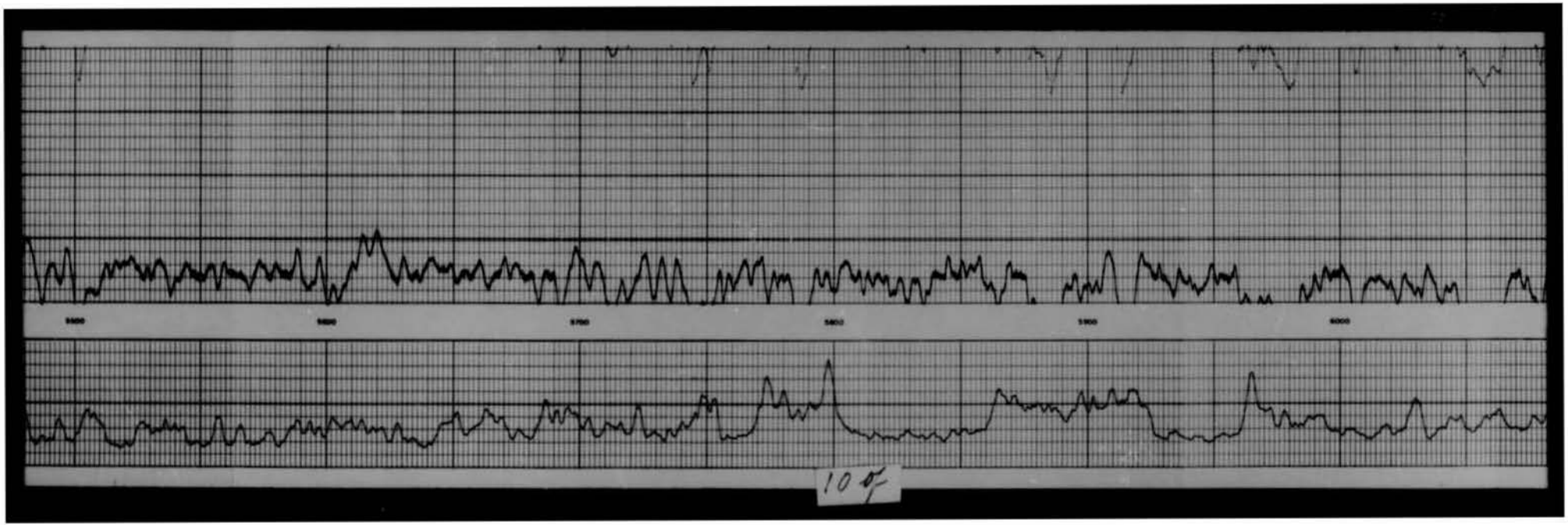

Main Drum
8500
8400
8300
8200
8100
8000
7900
7800
7700
7600
7500
7400
7300
7200
7100

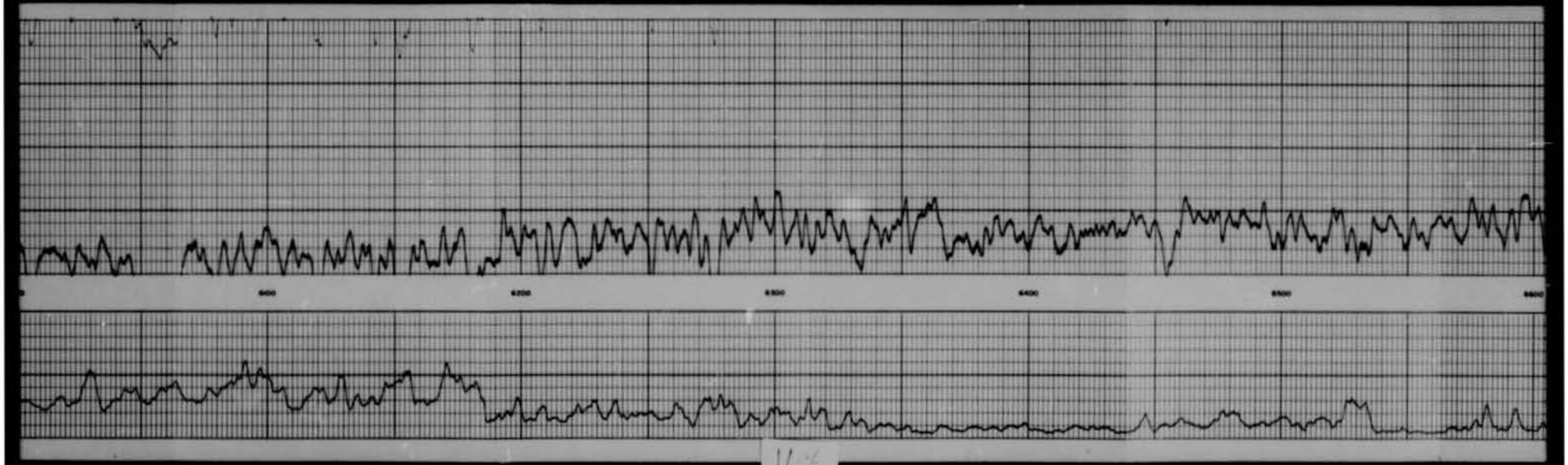

NEUTRON API UNITS
DEPTH
GAMMA RAY API UNITS
SPONT. POT.
5' = 100'
2700
2800
2900
6 of

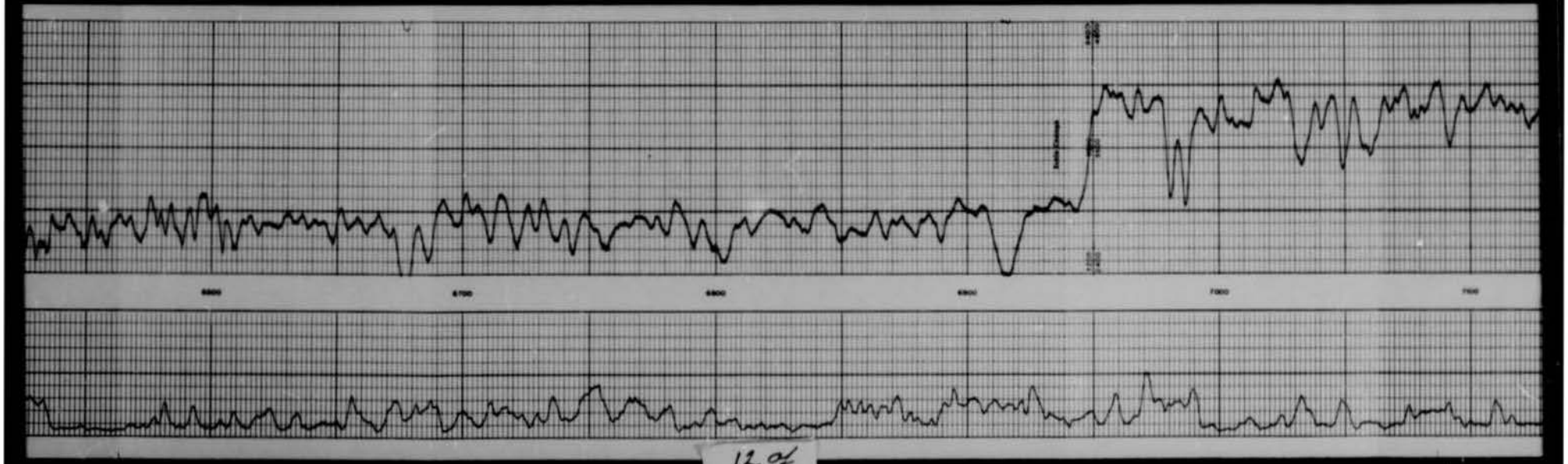

4000
4100
4200
4300
4400
4500
7 of


4500
4600
4700
4800
4900
5000

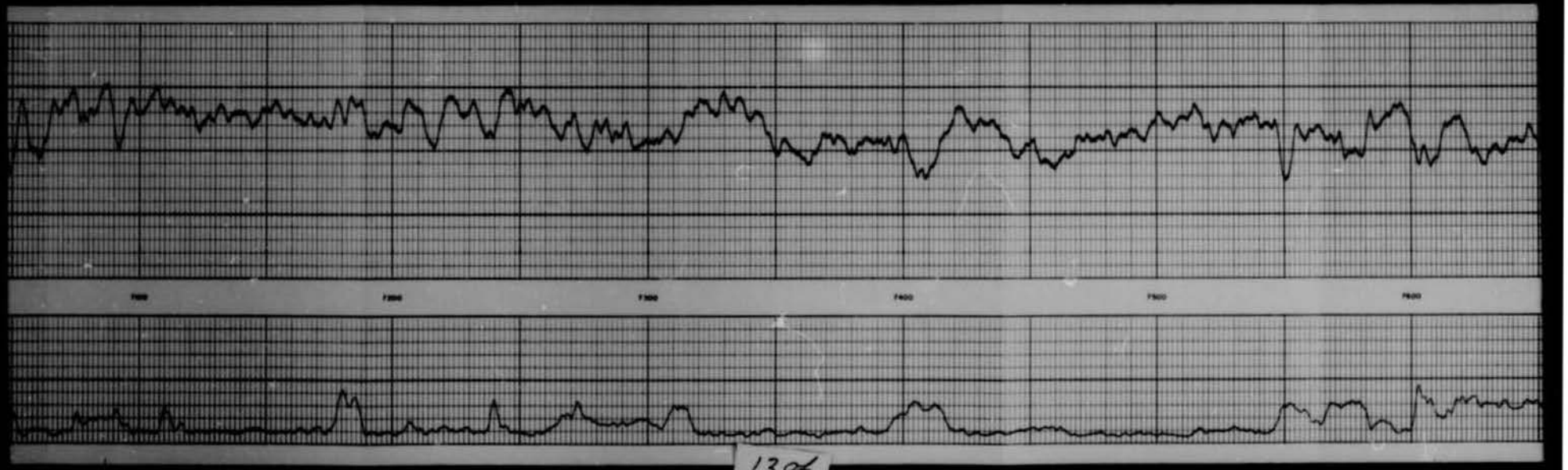



10 of

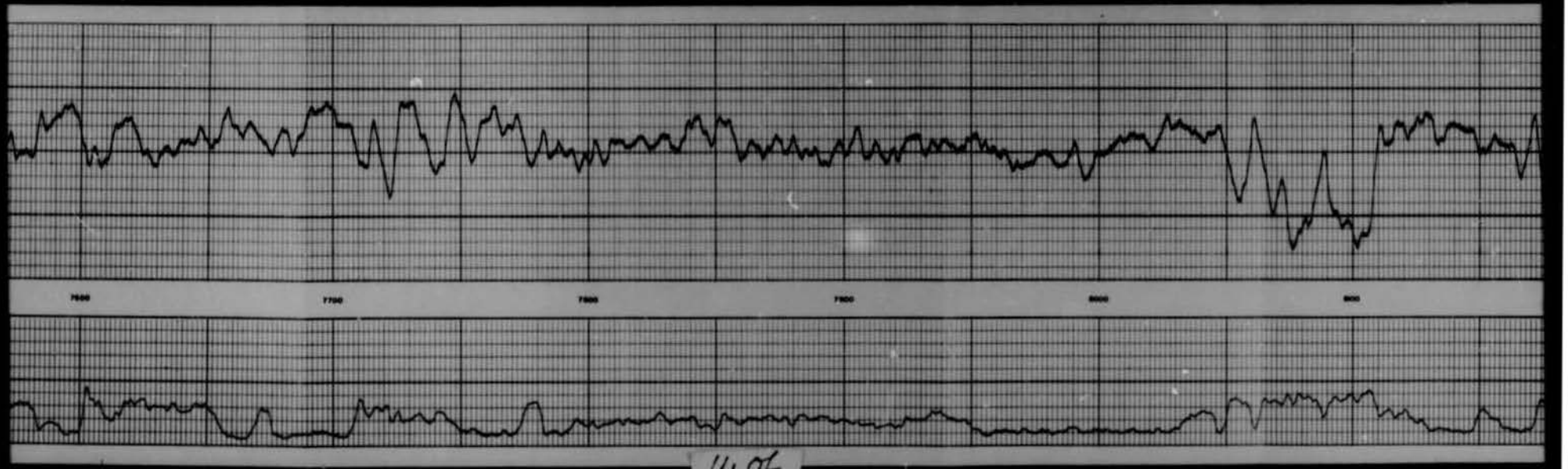

6100
6200
6300
6400
6500
6600



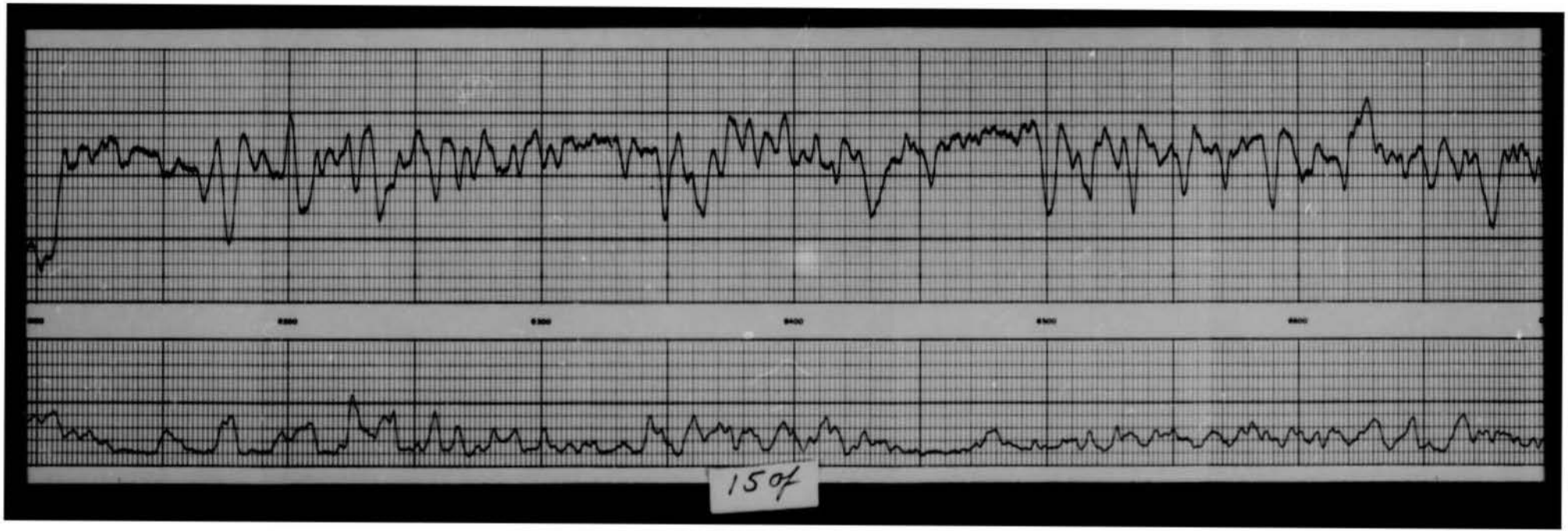
12 of

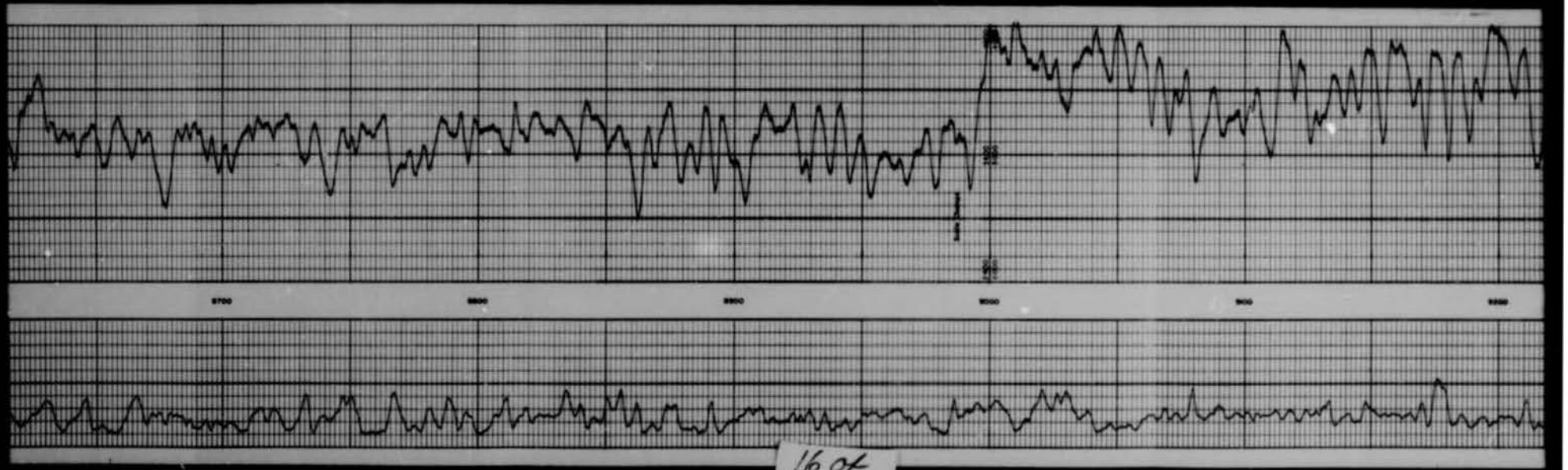


137

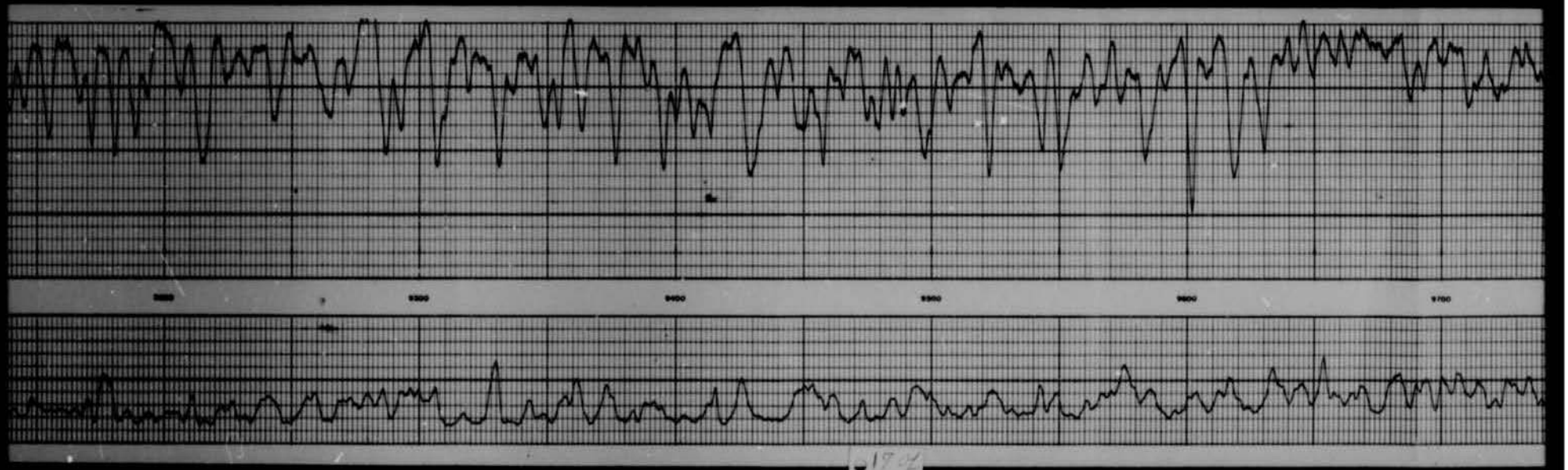


14 of

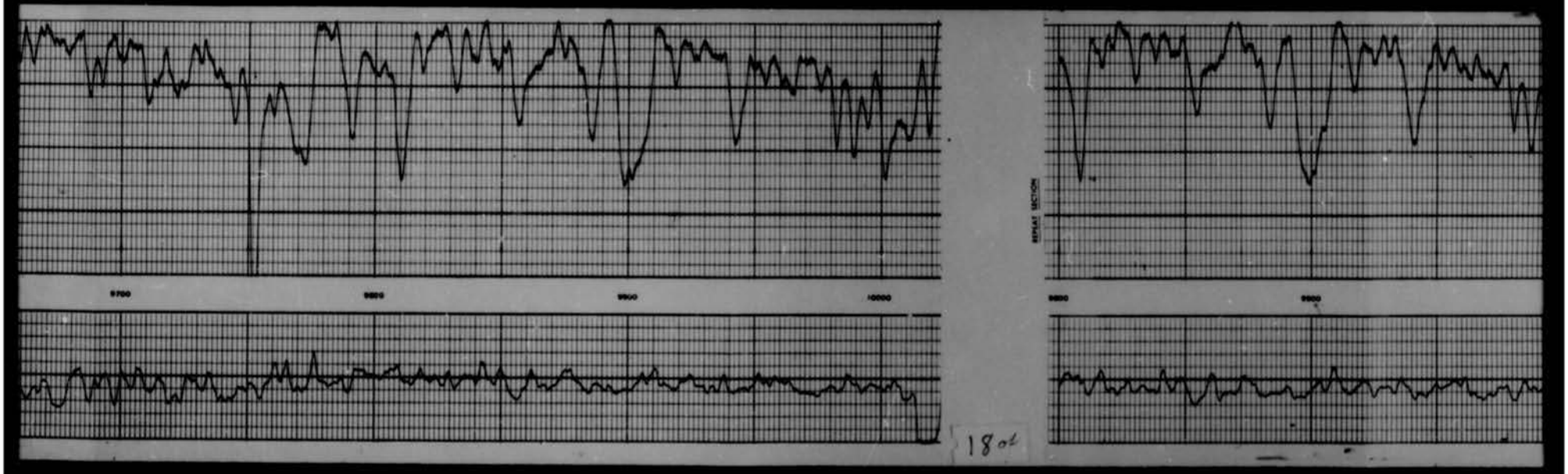

15 of

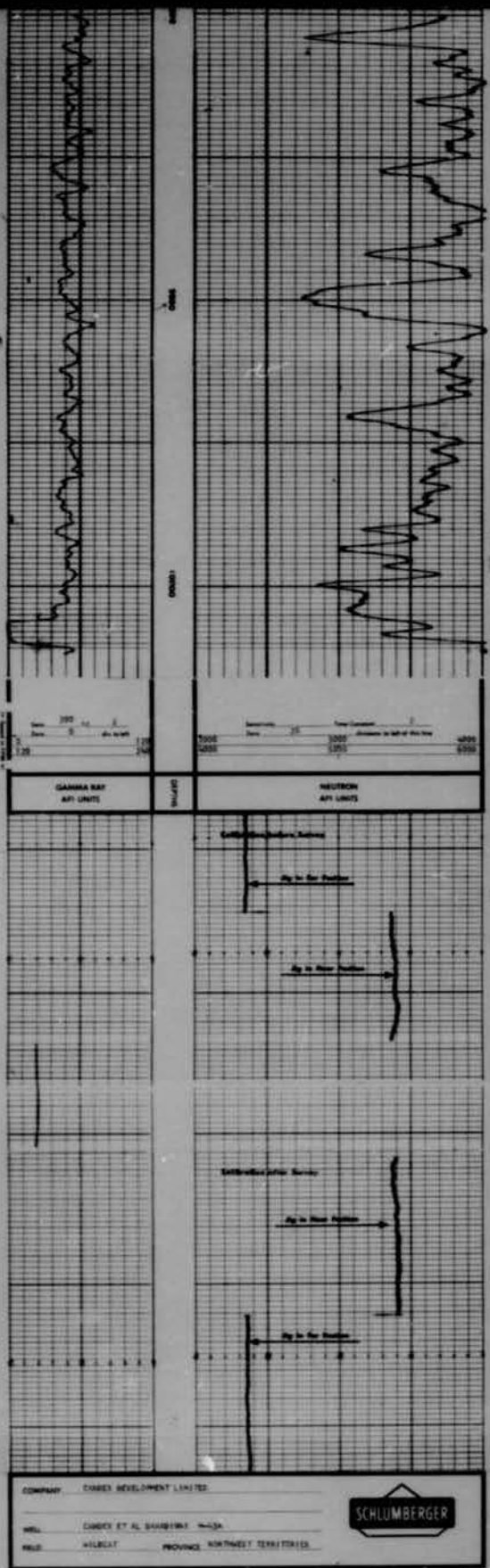


16 of



174


9700
9800
9900
10000
9800
9900
REPEAT SECTION
180


GAMMA RAY
API UNITS
DEPTH
NEUTRON
API UNITS
COMPANY
CANDEX DEVELOPMENT LIMITED
WELL
CANDEX ET AL SAHTAHNEY
FIELD
WILDCAT
PROVINCE
NORTHWEST TERRITORIES
SCHLUMBERGER

19919

SCHLUMBERGER FORMATION DENSITY LOG

COMPANY CANREX DEVELOPMENT LIMITED

WELL CANREX ET AL DANNEBROG H-A-01

FIELD WILDCAT

PROVINCE NORTHWEST TERRITORIES

LOCATION 69° 33' 00.0" N LAT
120° 39' 16.2" W LONG

Permanent Datum GL Elev. 0.0
Log Measured From KB 3.0 ft Above Perm. Datum

Other Services: CSL, FDC, DLL-MSFL, BHC, NGT

Elev: KB 512
GL 512
DF

Run No. 1
Date 5 APR 91
Depth-Driller 1800
Depth-Logger 1797
Bottom Logged Interval 1795
Top Log Interval 1200
Casing - Driller 13 3/8 @ 1200
Casing - Logger 1200
Bit Size 12 1/4
Type Fluid in Hole FRESHWATER
Dens. 9.2 Visc. 42
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp. 0.9 @ 4
Rmf @ Meas. Temp. 0.9 @ 4
Rmc @ Meas. Temp. 0.9 @ 4
Source: Rmf Rmc
Rm @ BHT 0.9 @ 4
Rmf @ BHT 0.9 @ 4
Rmc @ BHT 0.9 @ 4
Max. Rec. Temp. 41
Equip. No. 8 1/4"
Location
Recorded By 16"
Witnessed By PETRO
Run No. 2.5 MRL
Bit Size 8SGPH-L SGA
Type Fluid in Hole JUNESUN
Dens. KICKELL
Visc.
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Rm @ BHT
Rmf @ BHT
Rmc @ BHT
Max. Rec. Temp.
Equip. No.
Location
Recorded By
Witnessed By

Time Since Circ. 4 hrs
Max. Rec. Temp. 41
Equipment No. 2152 - 301
Location
Recorded By
Witnessed By

Run No. 1
Date 5 APR 91
Depth-Driller 1800
Depth-Logger 1797
Bottom Logged Interval 1795
Top Log Interval 1200
Casing - Driller 13 3/8 @ 1200
Casing - Logger 1200
Bit Size 12 1/4
Type Fluid in Hole FRESHWATER
Dens. 9.2 Visc. 42
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp. 0.9 @ 4
Rmf @ Meas. Temp. 0.9 @ 4
Rmc @ Meas. Temp. 0.9 @ 4
Rm @ BHT 0.9 @ 4
Rmf @ BHT 0.9 @ 4
Rmc @ BHT 0.9 @ 4
Max. Rec. Temp. 41
Equip. No. 8 1/4"
Location
Recorded By 16"
Witnessed By PETRO
Run No. 2.5 MRL
Bit Size 8SGPH-L SGA
Type Fluid in Hole JUNESUN
Dens. KICKELL
Visc.
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Rm @ BHT
Rmf @ BHT
Rmc @ BHT
Max. Rec. Temp.
Equip. No.
Location
Recorded By
Witnessed By

Time Since Circ. 4 hrs
Max. Rec. Temp. 41
Equipment No. 2152 - 301
Location
Recorded By
Witnessed By

Run No. 1
Date 5 APR 91
Depth-Driller 1800
Depth-Logger 1797
Bottom Logged Interval 1795
Top Log Interval 1200
Casing - Driller 13 3/8 @ 1200
Casing - Logger 1200
Bit Size 12 1/4
Type Fluid in Hole FRESHWATER
Dens. 9.2 Visc. 42
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp. 0.9 @ 4
Rmf @ Meas. Temp. 0.9 @ 4
Rmc @ Meas. Temp. 0.9 @ 4
Rm @ BHT 0.9 @ 4
Rmf @ BHT 0.9 @ 4
Rmc @ BHT 0.9 @ 4
Max. Rec. Temp. 41
Equip. No. 8 1/4"
Location
Recorded By 16"
Witnessed By PETRO
Run No. 2.5 MRL
Bit Size 8SGPH-L SGA
Type Fluid in Hole JUNESUN
Dens. KICKELL
Visc.
pH
Fluid Loss
Source of Sample
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Rm @ BHT
Rmf @ BHT
Rmc @ BHT
Max. Rec. Temp.
Equip. No.
Location
Recorded By
Witnessed By

Time Since Circ. 4 hrs
Max. Rec. Temp. 41
Equipment No. 2152 - 301
Location
Recorded By
Witnessed By

Time Since Circ.
Max. Rec. Temp.
Equipment No.
Location
Recorded By
Witnessed By

Time Since Circ.
Max. Rec. Temp.
Equipment No.
Location
Recorded By
Witnessed By

Time Since Circ.
Max. Rec. Temp.
Equipment No.
Location
Recorded By
Witnessed By

Time Since Circ.
Max. Rec. Temp.
Equipment No.
Location
Recorded By
Witnessed By

BULK DENSITY ρ_b g/cc — 2.0 2.5 3.0

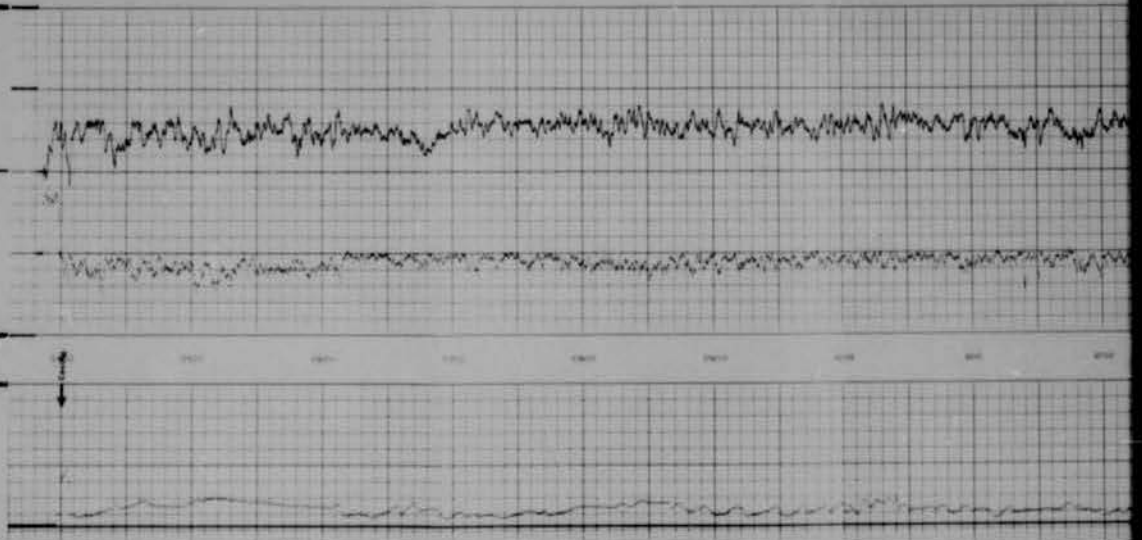
DENSITY CORRECTION $\Delta\rho$ g/cc — 0.25 0 0.25

DEPTHS

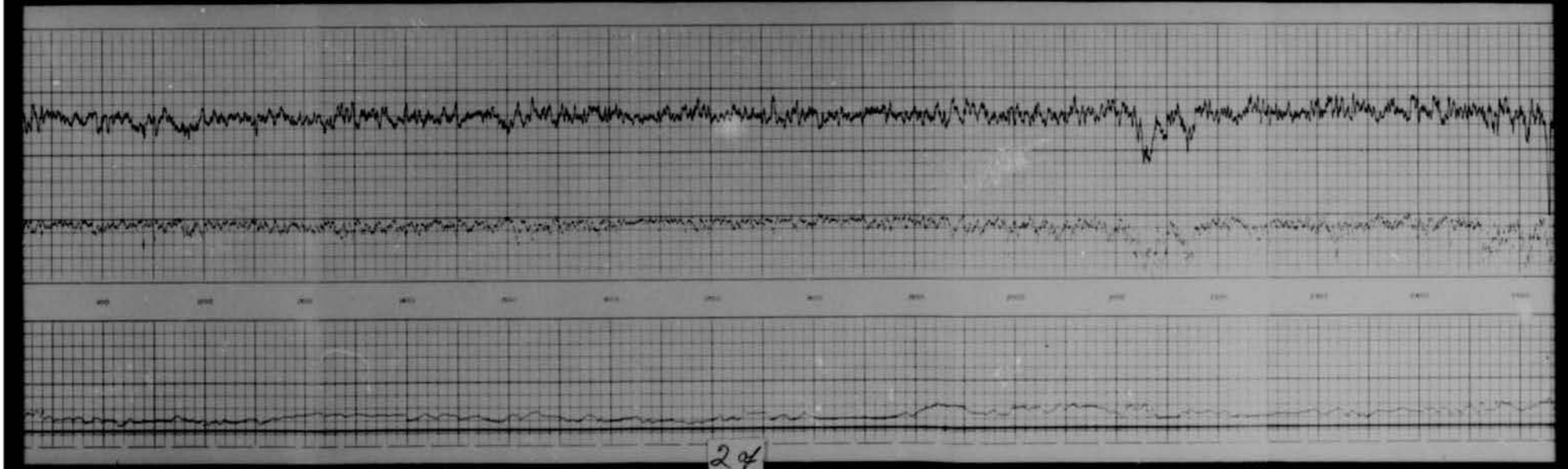
GAMMA RAY API UNITS — 0 100

CALIPER hole diameter in inches — 6 7 8 9 10 11 12 13 14

Speed in FPM

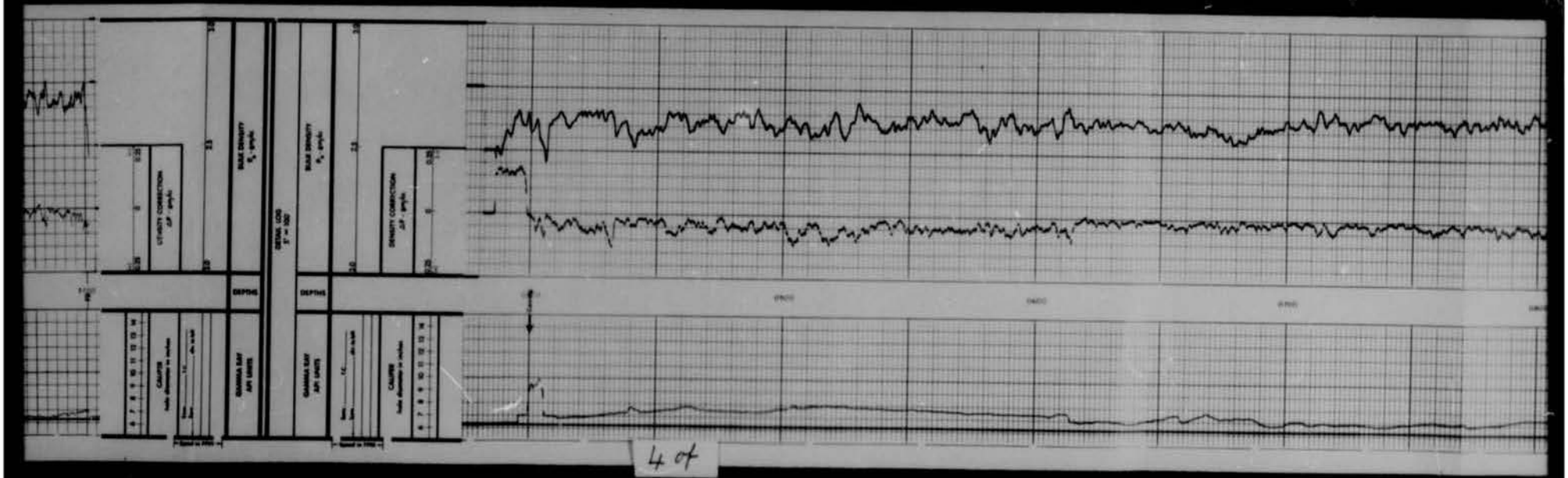


104

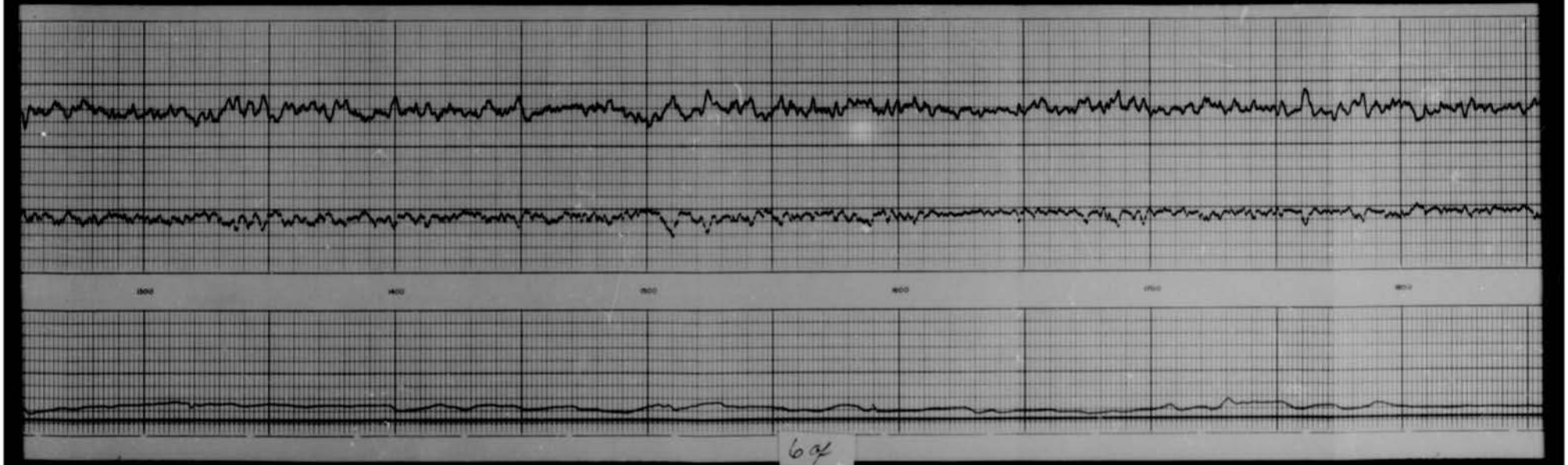


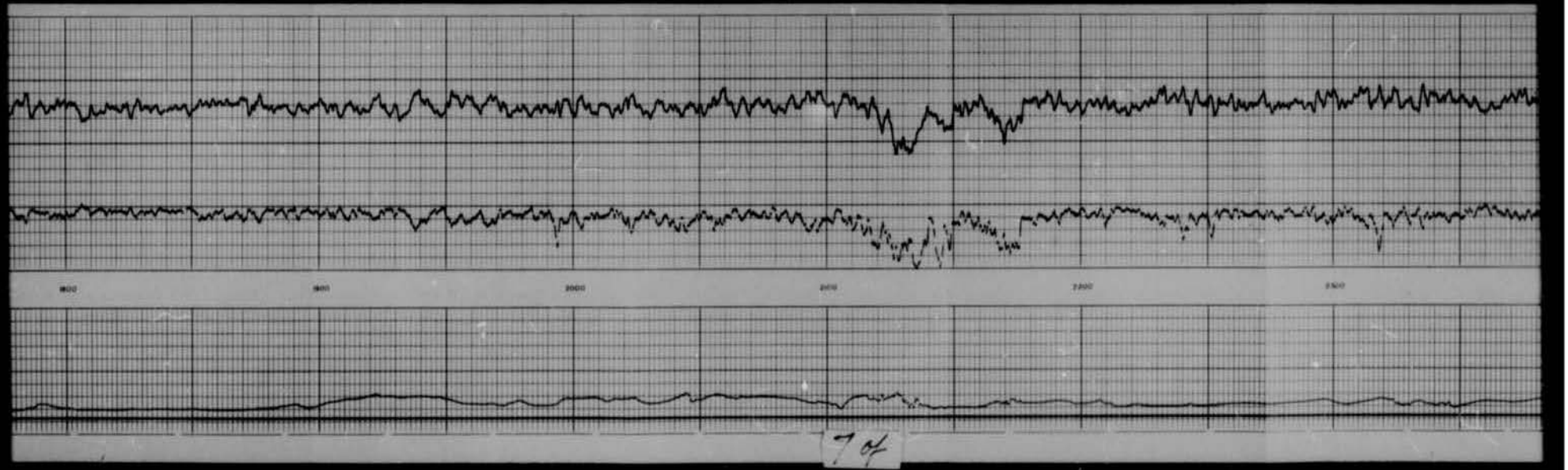
24


DENSITY CORRECTION
CALIPER
3 of

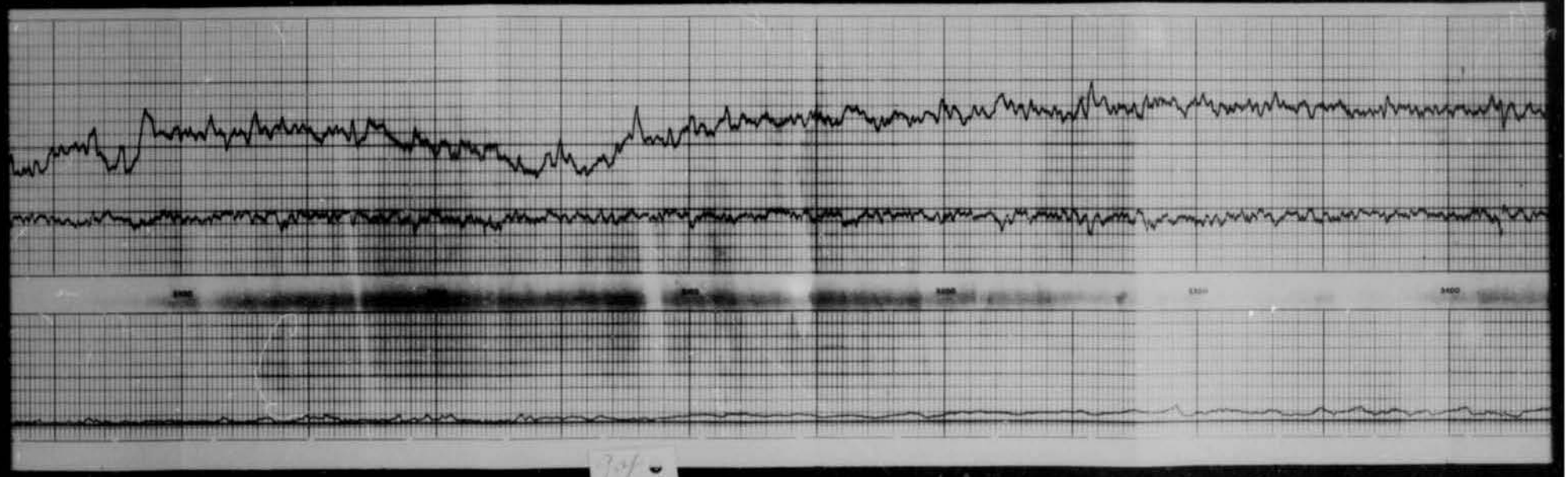

DENSITY CORRECTION
Δρ - g/cc
BULK DENSITY
ρb - g/cc
DETAIL LOG
5" = 100'
DEPTHS
GAMMA RAY
API UNITS
CALIPER
hole diameter in inches

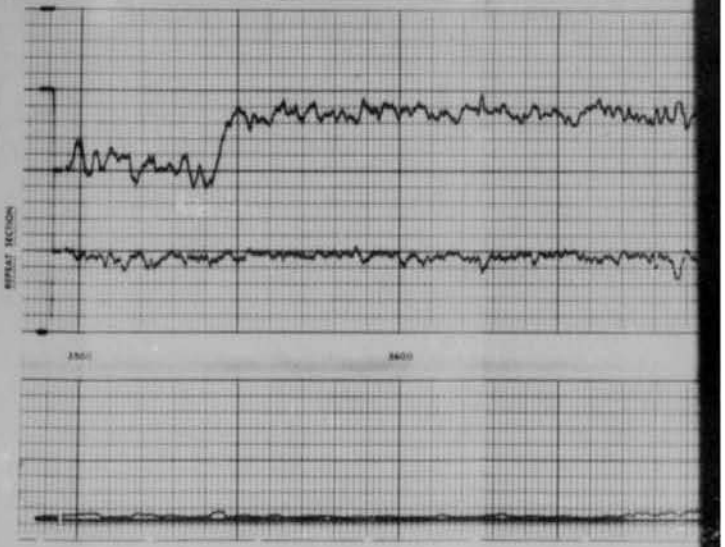
4 of


6 of

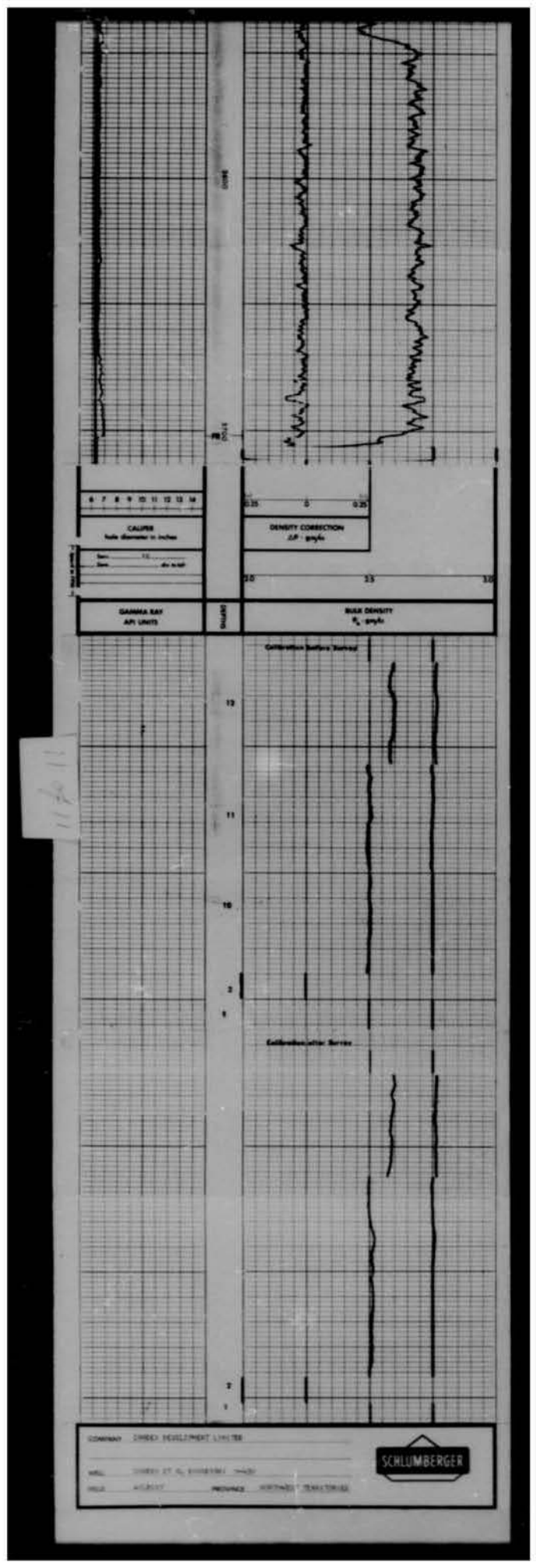

7 of


2400
2500
2600
2700
2800
2900
8 of





10 of


6 7 8 9 10 11 12 13 14
CALIPER
hole diameter in inches
GAMMA RAY
API UNITS
DEPTH
FEET
0.25 0 0.25
DENSITY CORRECTION
2.0 2.5 3.0
MAX DENSITY
Calibration Before Survey
Calibration after Survey
COMPANY
SCHLUMBERGER

SCHLUMBERGER

CALIPER LOG

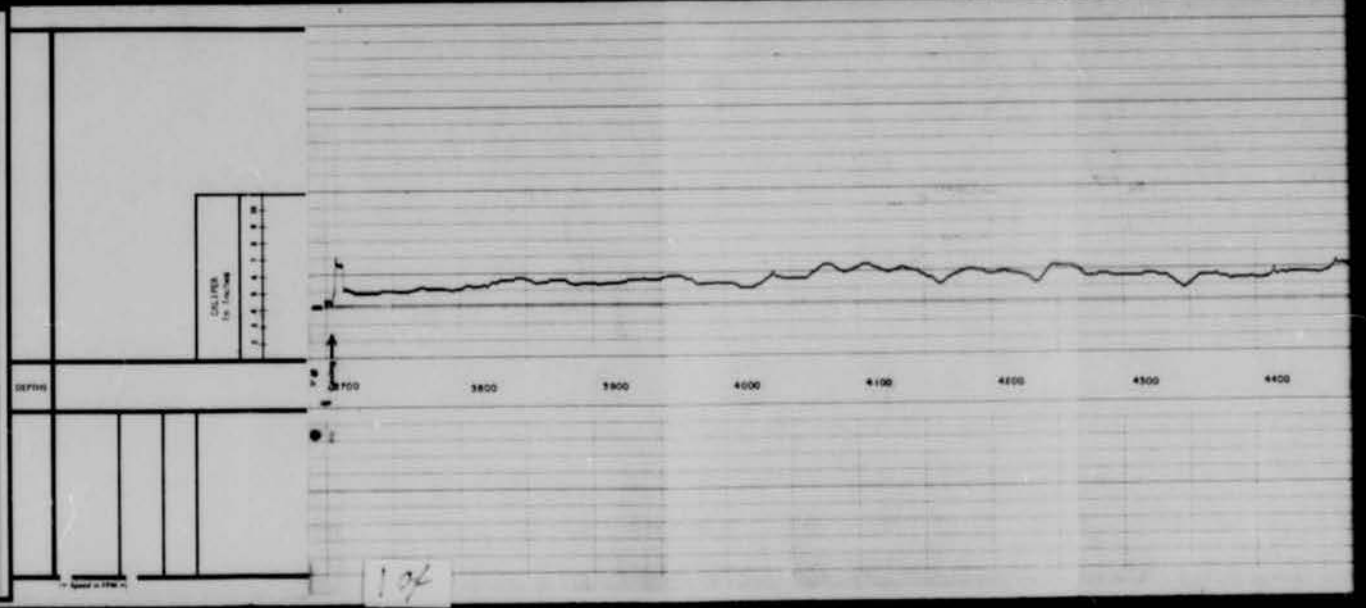
COMPANY	CHABEX DEVELOPMENT LIMITED
WELL	CHABEX ET AL BANBRIDGE M-45A
FIELD	WILDCAT
PROVINCE	NORTHWEST TERRITORIES
LOCATION	63° 51' 55.3" N LAT 126° 38' 15.2" W LONG

Permanent Datum	GL	Elev.	913
Log Measured From	KB	3	ft. Above Perm. Datum

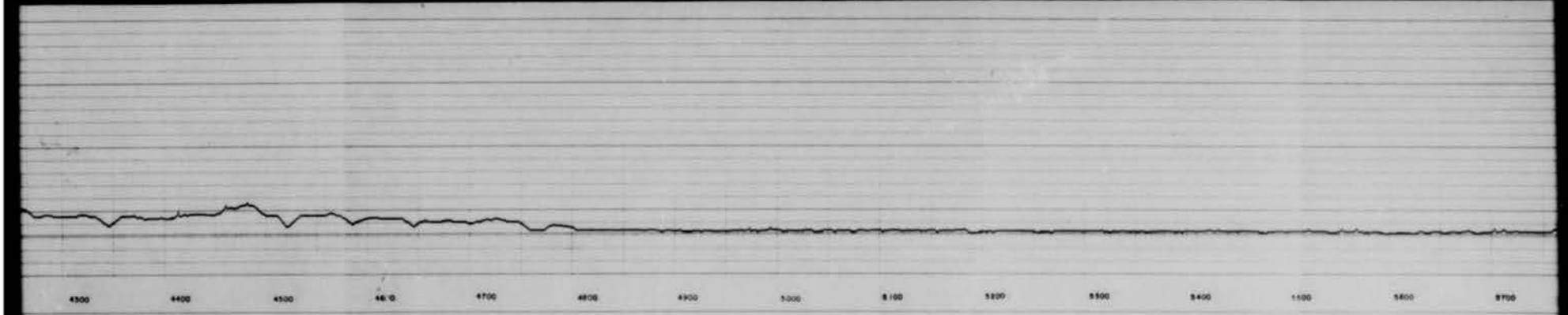
Elev. KB	917
GL	913
DF	

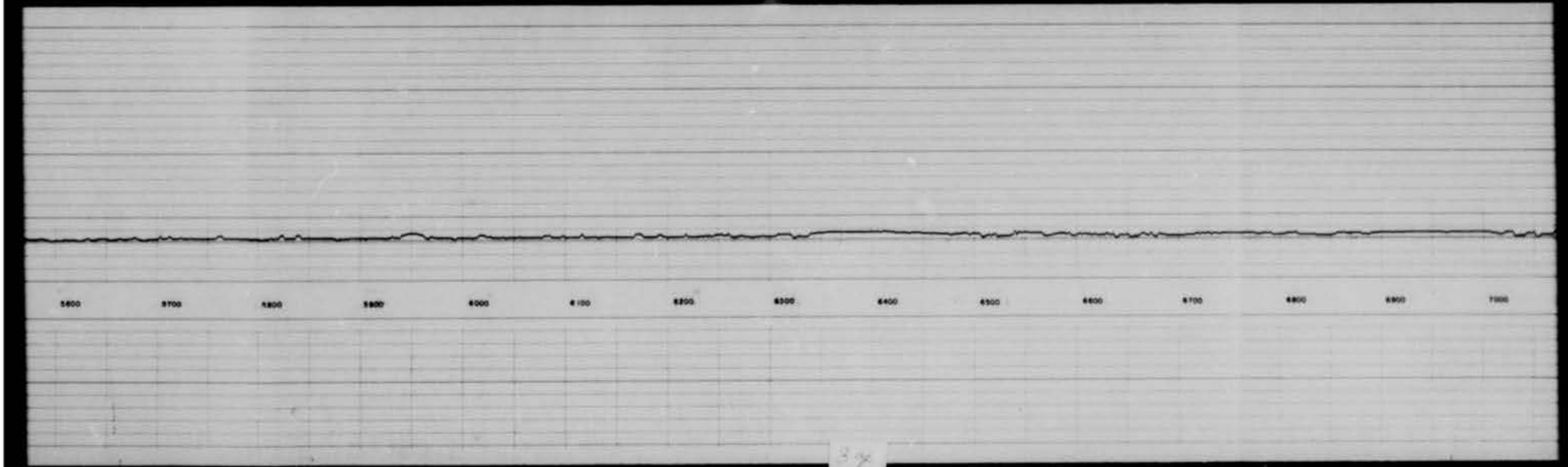
Date	30 AUG 71					
Run No.	ONE					
First Reading	12171					
Last Reading	3701					
Feet Measured	8470					
Depth Reached	12171					
Bottom Driller	12171					
Log 1st	3707					
Log On Bot	3701					
Mud Density	POLYMER					
Viscosity	8.2	47				
Mud pH	-					
Mud Level	-					
Max. Rec.	-	-	-	-	-	-
@ BHT	-	-	-	-	-	-
Est. Bot.	-	-	-	-	-	-
Max. Rec.	-	-	-	-	-	-
Bit Size	4 1/4"					
Spacer	3		3		3	
Unit Rig Name	5 UNI					
Truck No.	BRUNS-G. REN					
Recorded By	HAYNES					
Witnessed By	KASNAR					

Cable No.	1
Cable Type	5
Tool No.	5
Tool Type	CALIPER

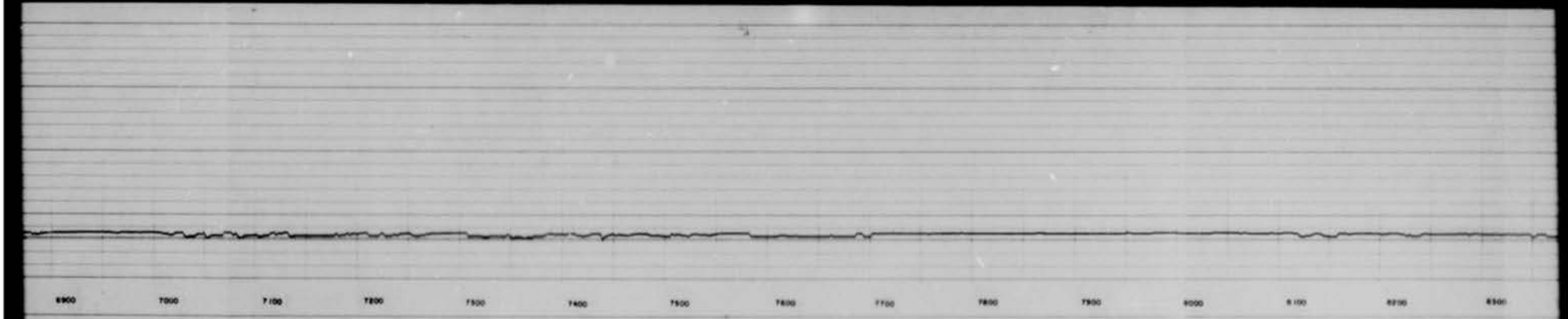


104

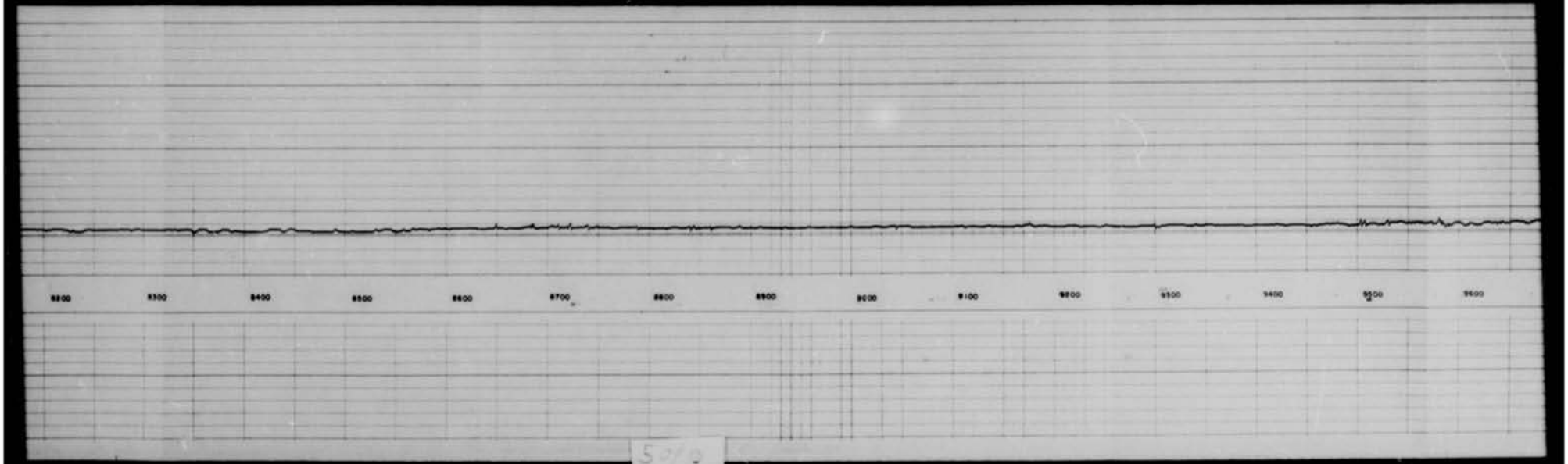

4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700


5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000

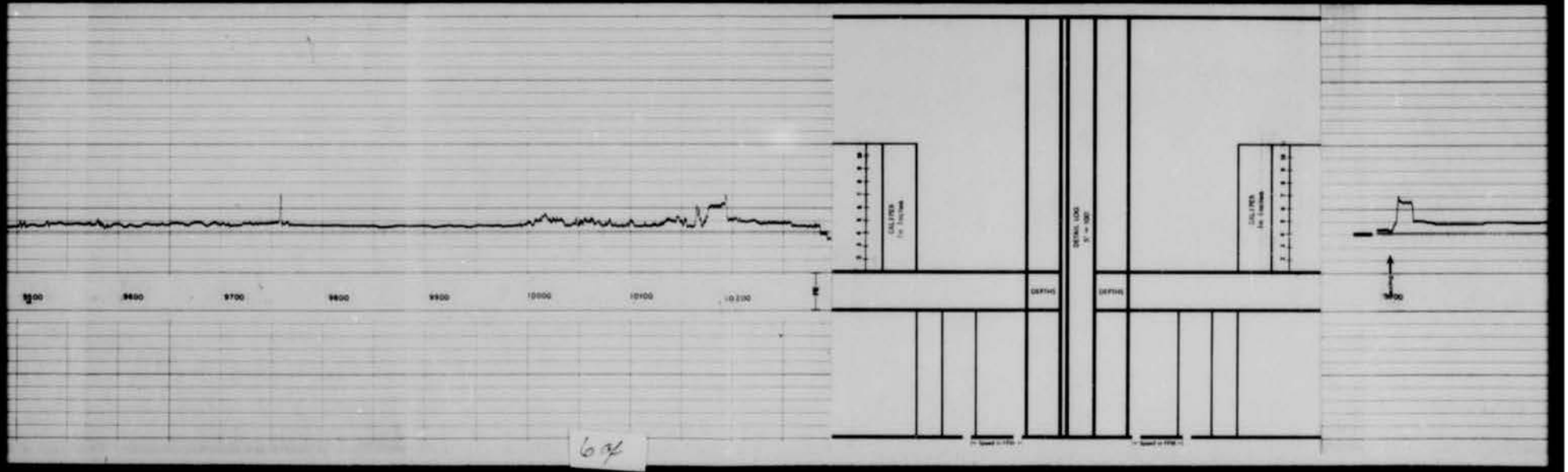
3 %


6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300

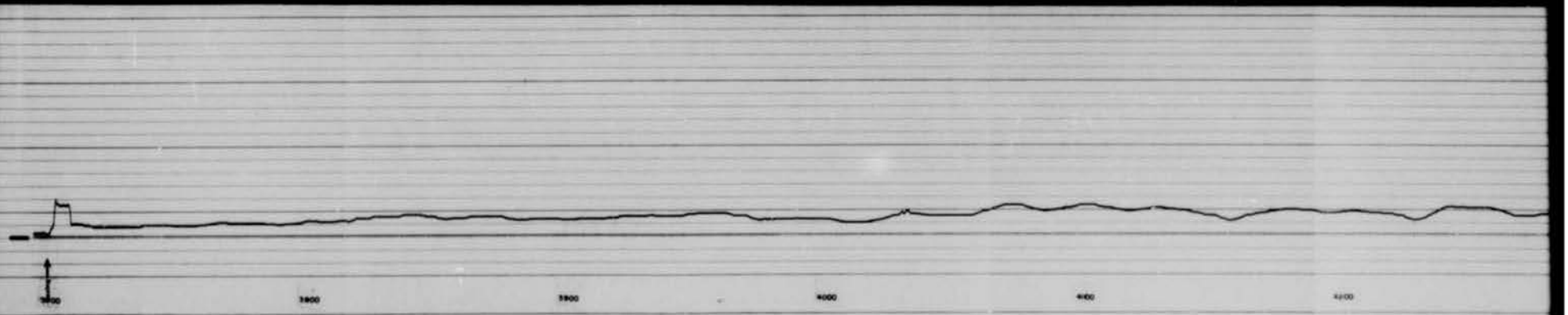
4 of

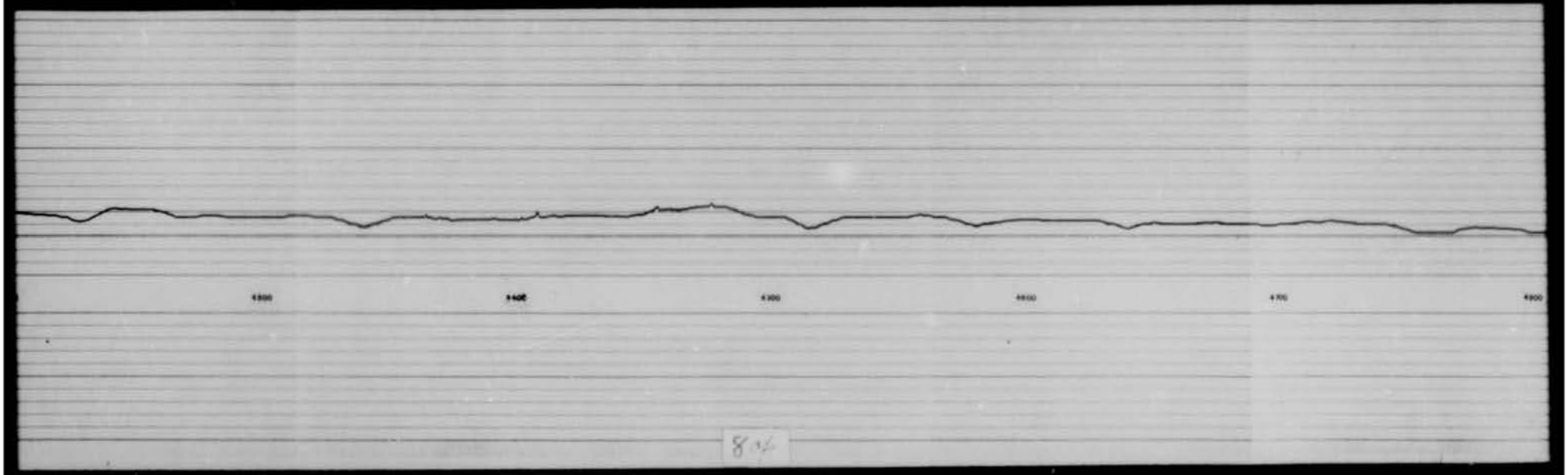

8200
8300
8400
8500
8600
8700
8800
8900
9000
9100
9200
9300
9400
9500
9600

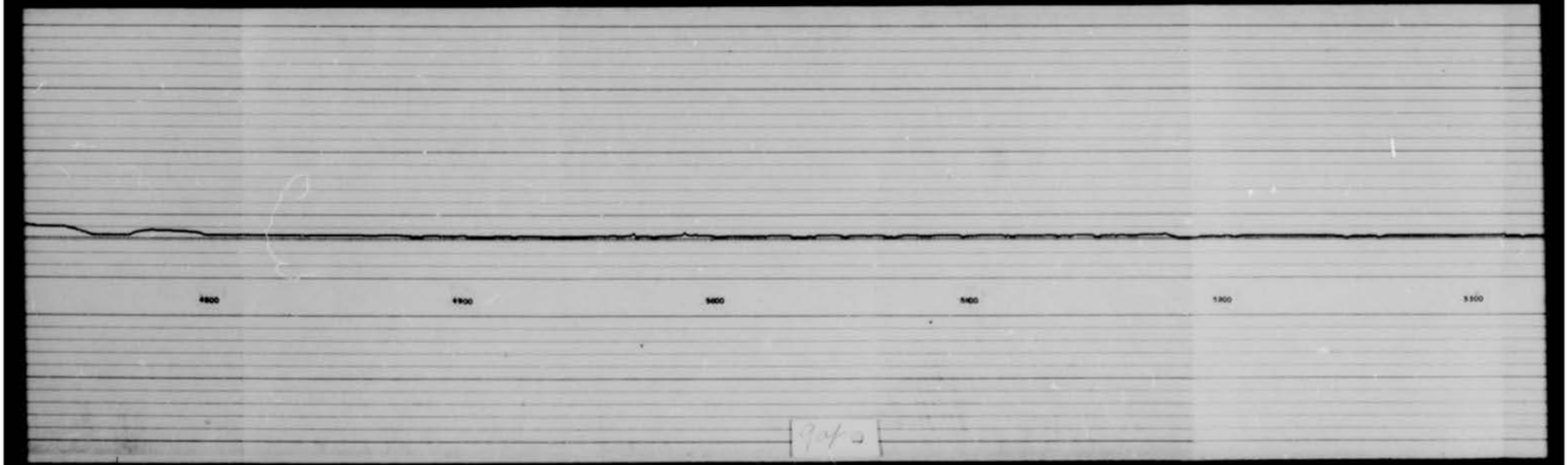
5 of 9

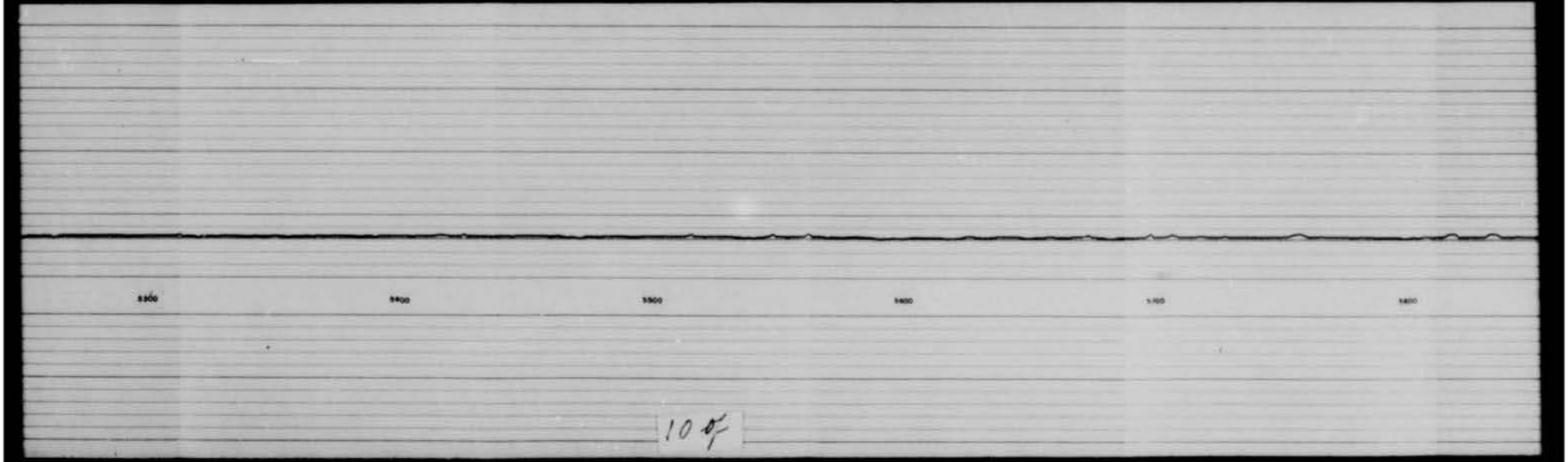

9600
9700
9800
9900
10000
10100
10200
CALIPER
DETAIL LOG
DEPTHS
DEPTHS
CALIPER

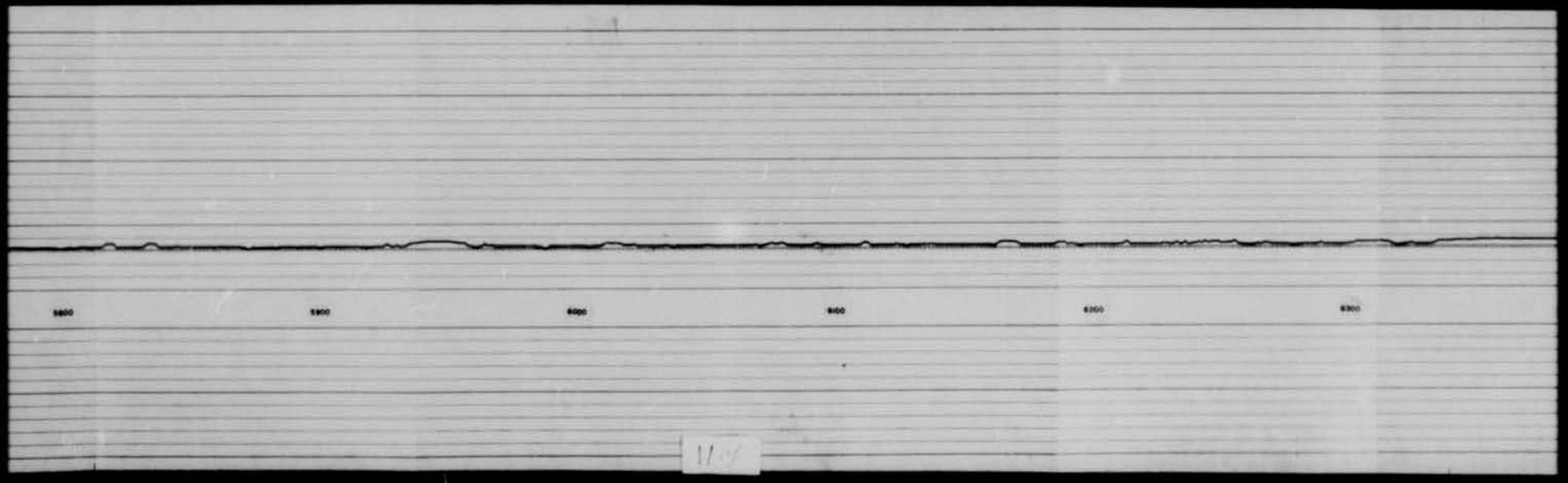
64

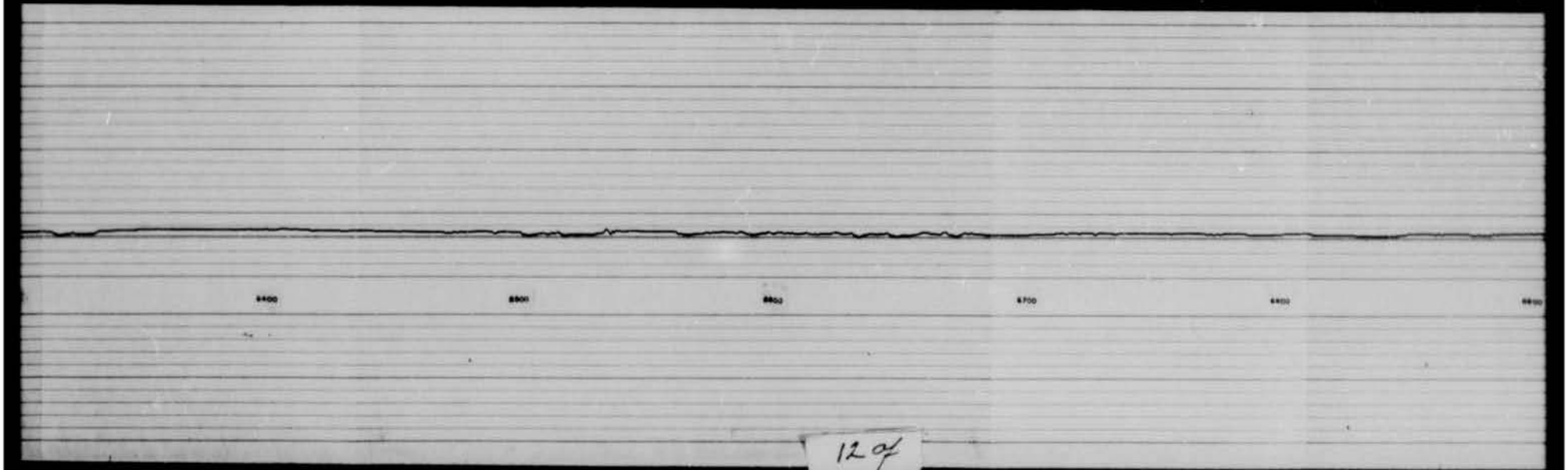

3800
3900
4000
4100
4200

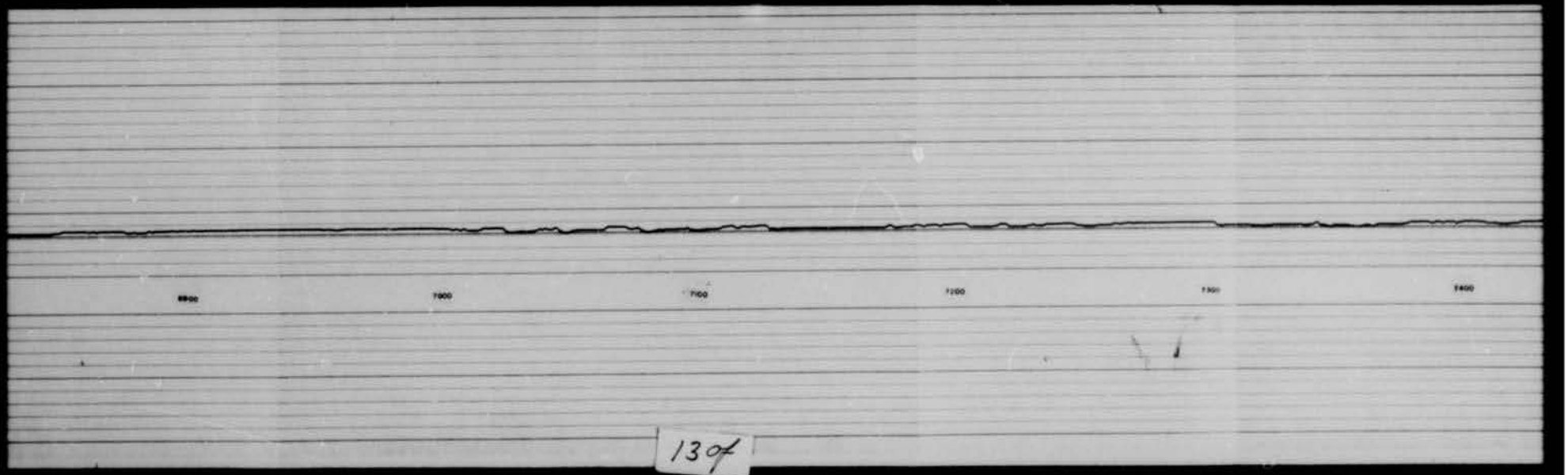

8%

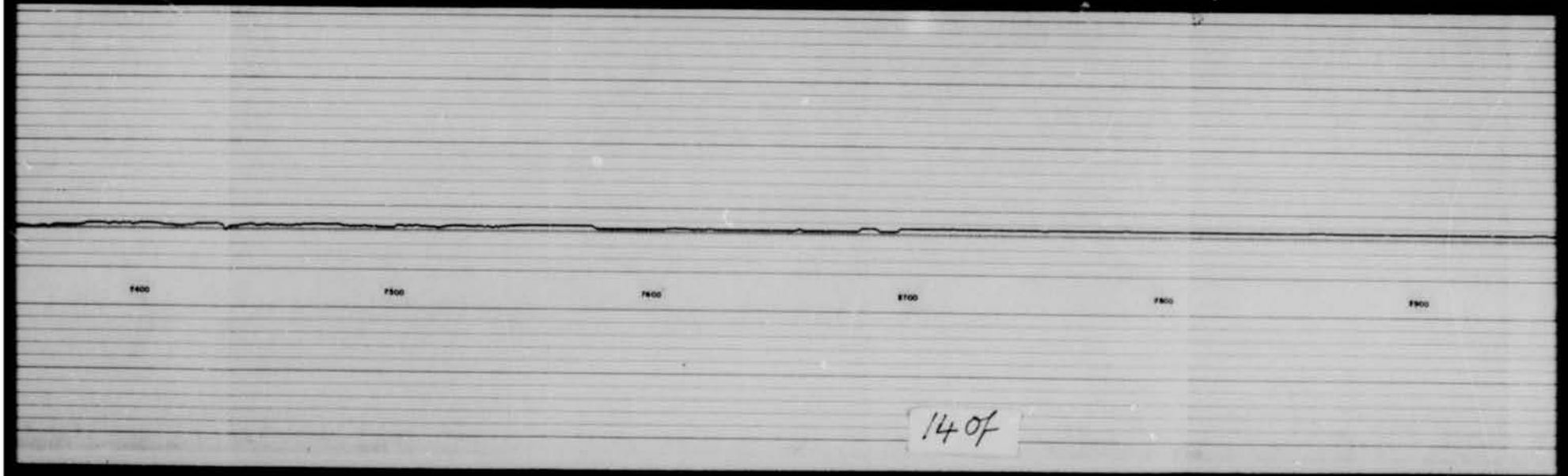

4800
4900
5000
5100
5200
5300
940

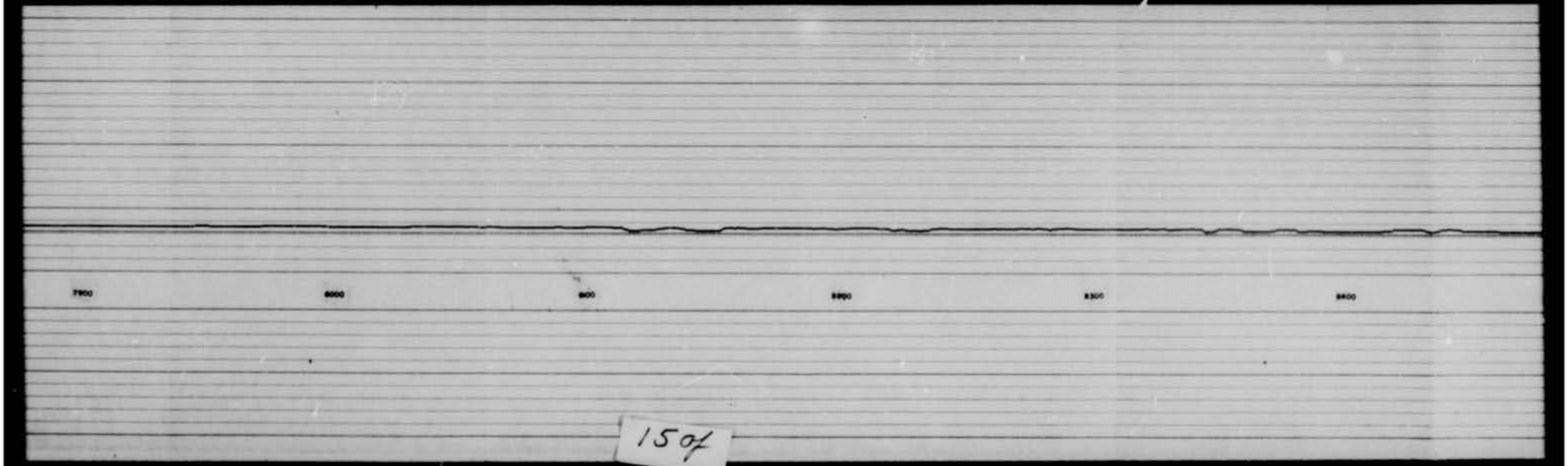

5300
5400
5500
5600
5700
5800
10 of


5800
5900
6000
6100
6200
6300

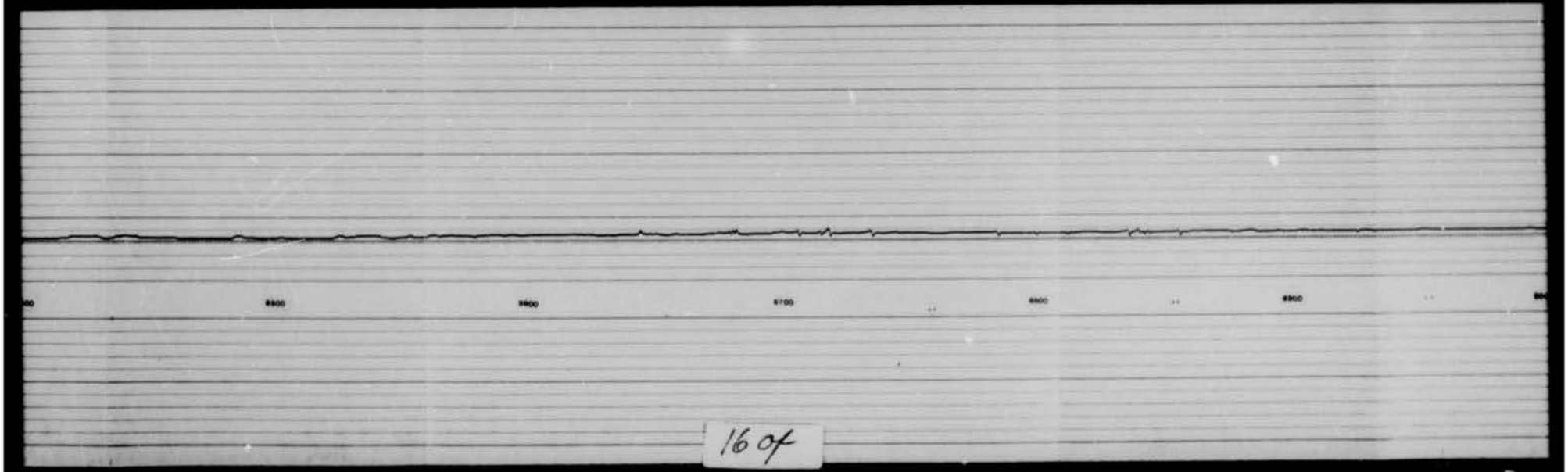

12 of

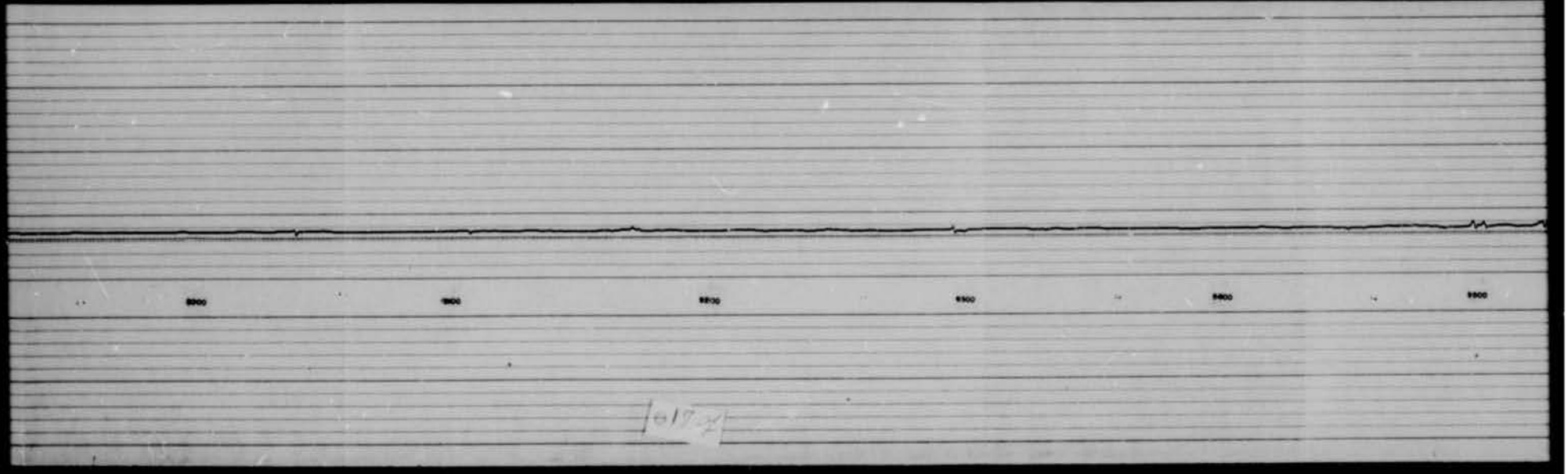

6900
7000
7100
7200
7300
7400
130f

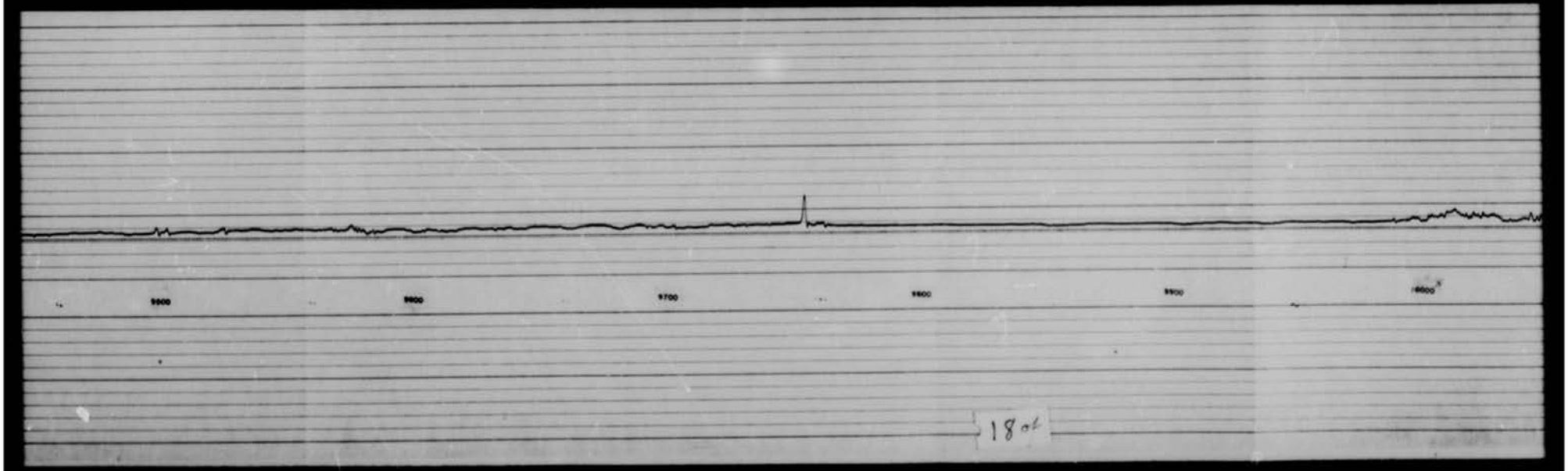

7400
7500
7600
7700
7800
7900
14 of

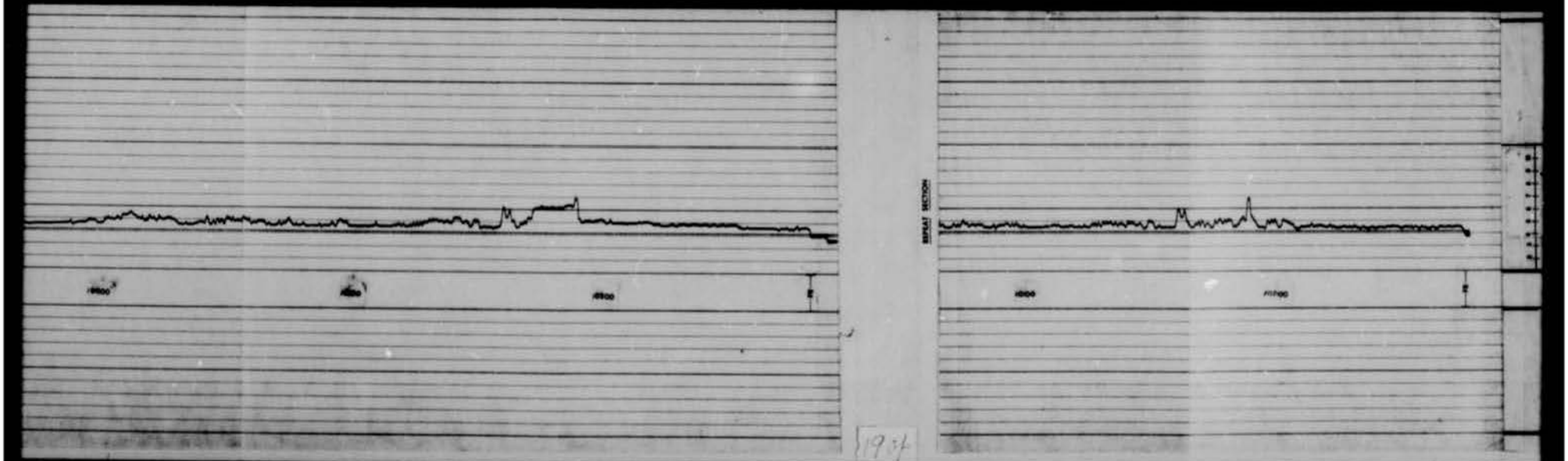


15 of

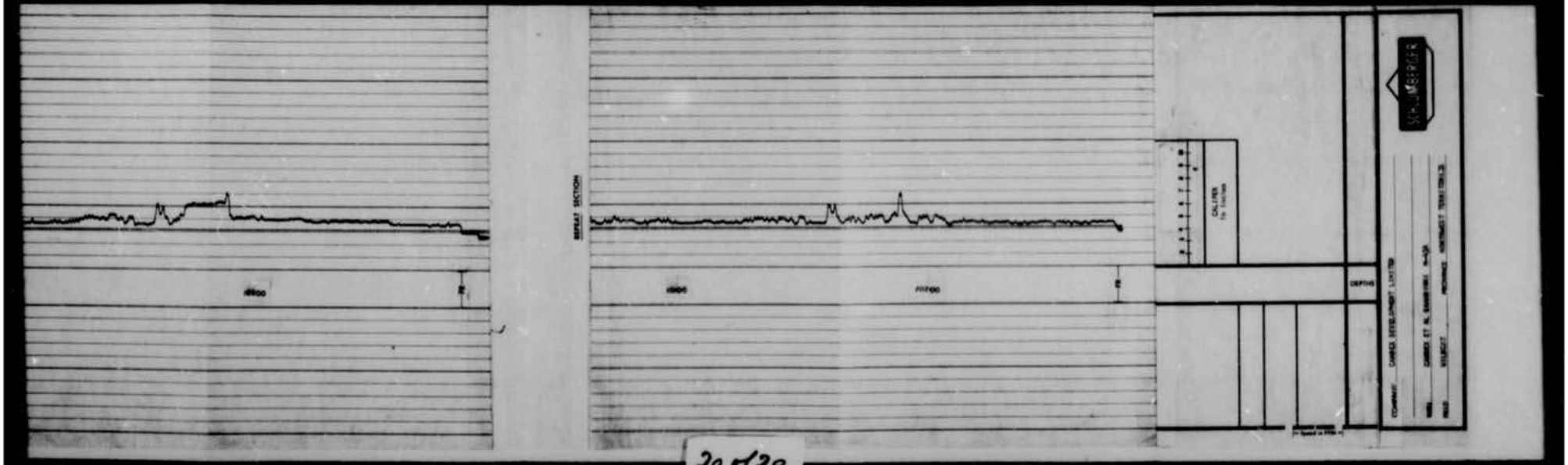

8500
8600
8700
8800
8900
16 of


5900
5800
5900


9900
9800
9700
9600
9500
9400
180t



1934


REPLAY SECTION
CALIPER
DEPTH
SCHLUMBERGER
COMPANY CANADA DEVELOPMENT LIMITED
WELL CANADA ET AL SAMARCHIS A-13
FIELD SUBJECT PROMINENT VENTURES TRIASSIC

20 of 20

SCHLUMBERGER

BOREHOLE COMPENSATED SONIC LOG

COMPANY: CANDEX DEVELOPMENT LIMITED

WELL: CANDEX ET AL SANDWIKI N-434

FIELD: WILDCAT

PROVINCE: NORTHWEST TERRITORIES

LOCATION: 63° 13' 19.3" N LAT 124° 33' 15.7" W LONG

Other Services: CALIPER (ES, PRC, BIL, LWD)

Permanent Datum: GL Elev. 813 ft

Log Measured From: KB 5 ft Above Perm. Datum

Elev. KB 827 ft, DF 813 ft, GL 813 ft

Run No.	3	4
Date	20 Aug 71	20 Aug 71
Depth-Driller	3562	9600
Depth-Logger	3561	10375
Bottom Log Interval	3551	3710
Top Log Interval	3301	9500
Casing-Driller	3293	10278
Casing-Logger	3293	10273
Bit Size	9 1/2"	3792
Type Fluid in Hole	9.1	3792
Viscosity	42	9.7
Fluid Loss	8.7	42
Source of Sample	INTERNAL	POLYMER
Rm @ Measured Temp	3.2	
Rmf @ Measured Temp	3.0	
Rmc @ Measured Temp		
Source Rmf / Rmc		
Rm @ BHT		
Max. Rec. Temp. °F		
Equipment Number		
Location		
Recorded By		
Witnessed By		
Bit No.	6 1/2"	6 1/2"
Type		
Size	8"	8"
Type Fluid in Hole		
Density		
Viscosity		
Pump Pressure		
Flow Line Temp.		
Max. Rec. Temp. °F	1 HRS	13 HRS
Equipment Number		
Location		
Recorded By		
Witnessed By		

Company: CANDEX DEVELOPMENT LIMITED

Well: CANDEX ET AL SANDWIKI N-434

Field: WILDCAT

Province: NORTHWEST TERRITORIES

Permanent Datum: GL Elev. 813 ft

Log Measured From: KB 5 ft Above Perm. Datum

Elev. KB 827 ft, DF 813 ft, GL 813 ft

Run No. 3 | Date 20 Aug 71 | Depth-Driller 3562 | Depth-Logger 3561 | Bottom Log Interval 3551 | Top Log Interval 3301 | Casing-Driller 3293 | Casing-Logger 3293 | Bit Size 9 1/2" | Type Fluid in Hole | Density 9.1 | Viscosity 42 | Fluid Loss 8.7 | Source of Sample INTERNAL | Rm @ Measured Temp 3.2 | Rmf @ Measured Temp 3.0 | Rmc @ Measured Temp | Source Rmf / Rmc | Rm @ BHT | Max. Rec. Temp. °F | Equipment Number | Location | Recorded By | Witnessed By | Bit No. 6 | Type | Size 8" | Type Fluid in Hole | Density | Viscosity | Pump Pressure | Flow Line Temp. | Max. Rec. Temp. °F 1 HRS | Equipment Number | Location | Recorded By | Witnessed By

Run No. 4 | Date 20 Aug 71 | Depth-Driller 9600 | Depth-Logger 10375 | Bottom Log Interval 3710 | Top Log Interval 9500 | Casing-Driller 10278 | Casing-Logger 10273 | Bit Size 3792 | Type Fluid in Hole | Density 9.7 | Viscosity 42 | Fluid Loss | Source of Sample POLYMER | Rm @ Measured Temp | Rmf @ Measured Temp | Rmc @ Measured Temp | Source Rmf / Rmc | Rm @ BHT | Max. Rec. Temp. °F | Equipment Number | Location | Recorded By | Witnessed By | Bit No. 6 1/2" | Type | Size 8" | Type Fluid in Hole | Density | Viscosity | Pump Pressure | Flow Line Temp. | Max. Rec. Temp. °F 13 HRS | Equipment Number | Location | Recorded By | Witnessed By

File No. 3 SIZE RECONSTRUCTED FROM BIT/CSG DATA
CALIPER FROM TTC

Cement Top Tag Log 9500 ft

Sonic Top Log 10,2 ft

Gamma Ray Calibration Type: Internal Check

Gamma Ray Calibration Value: 60

Sonic Interval Transit Time microseconds per foot: 90 – 140

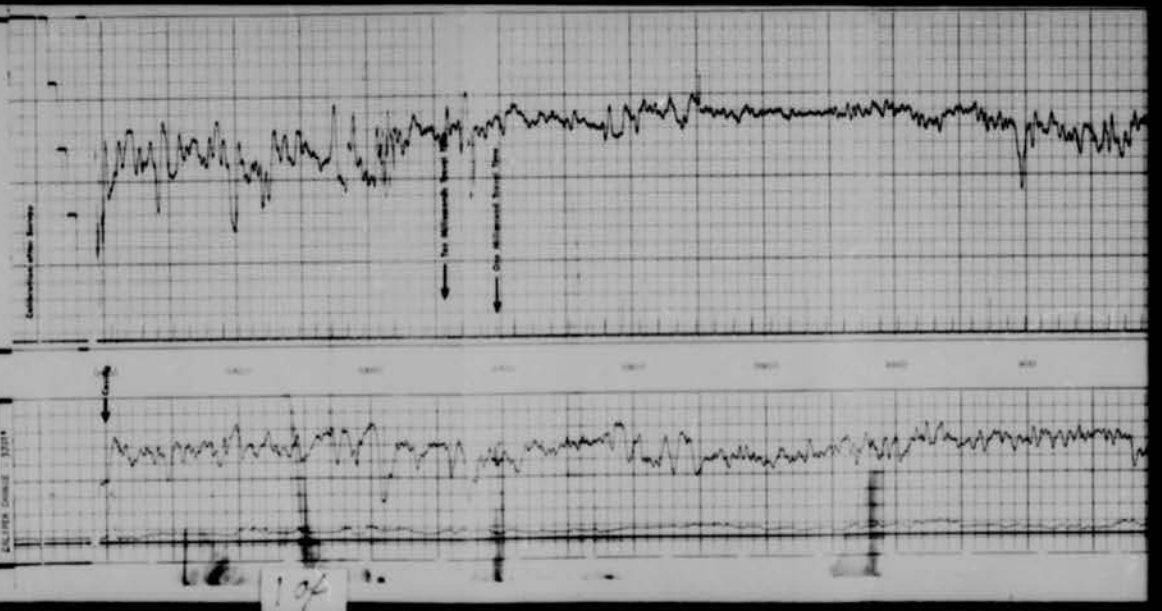
SCALE CHANGE - 3701'

DEPTHS

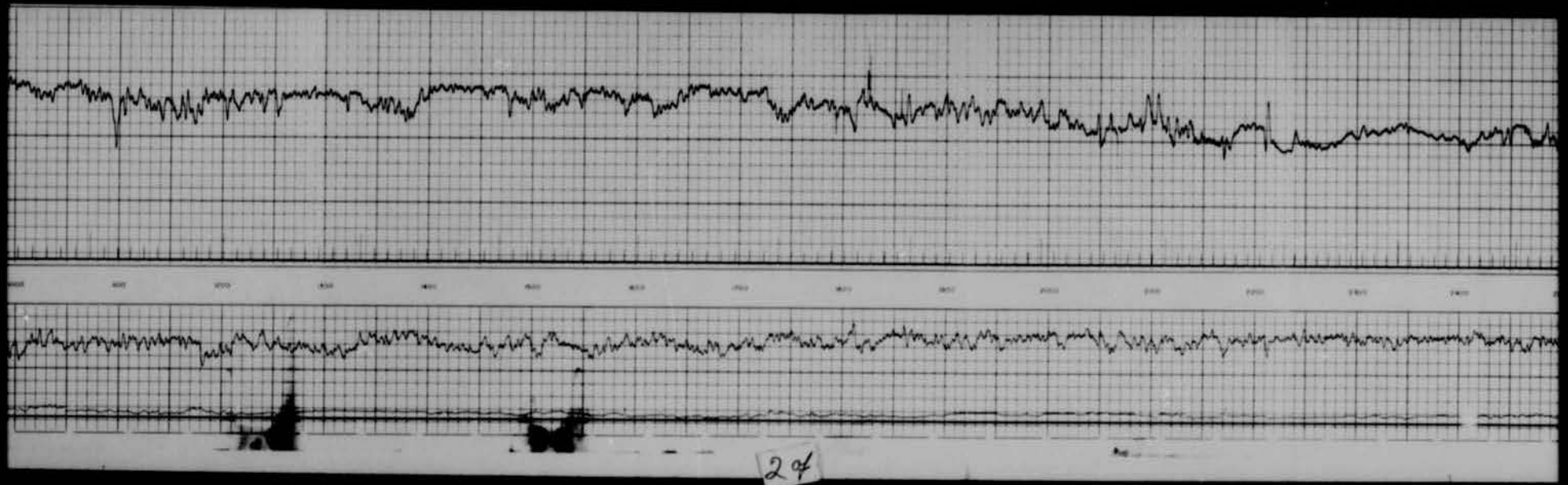
Gamma Ray API Units: 110 – 360

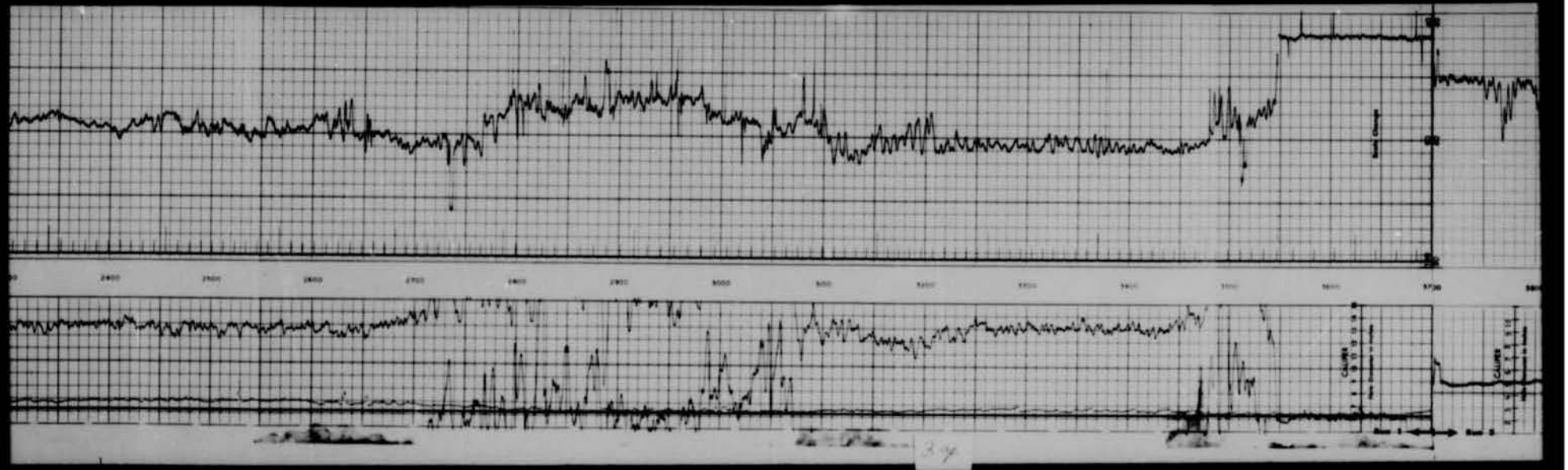
CALIPER from Bit Size in inches: 6 – 14

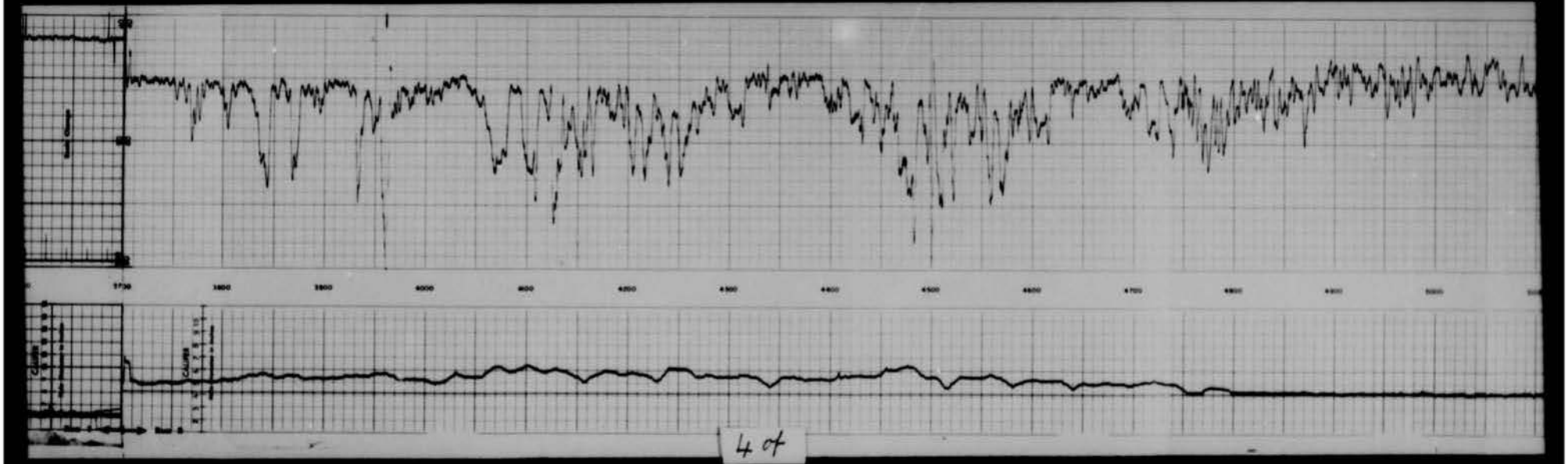
CALIPER CHANGE - 3701'

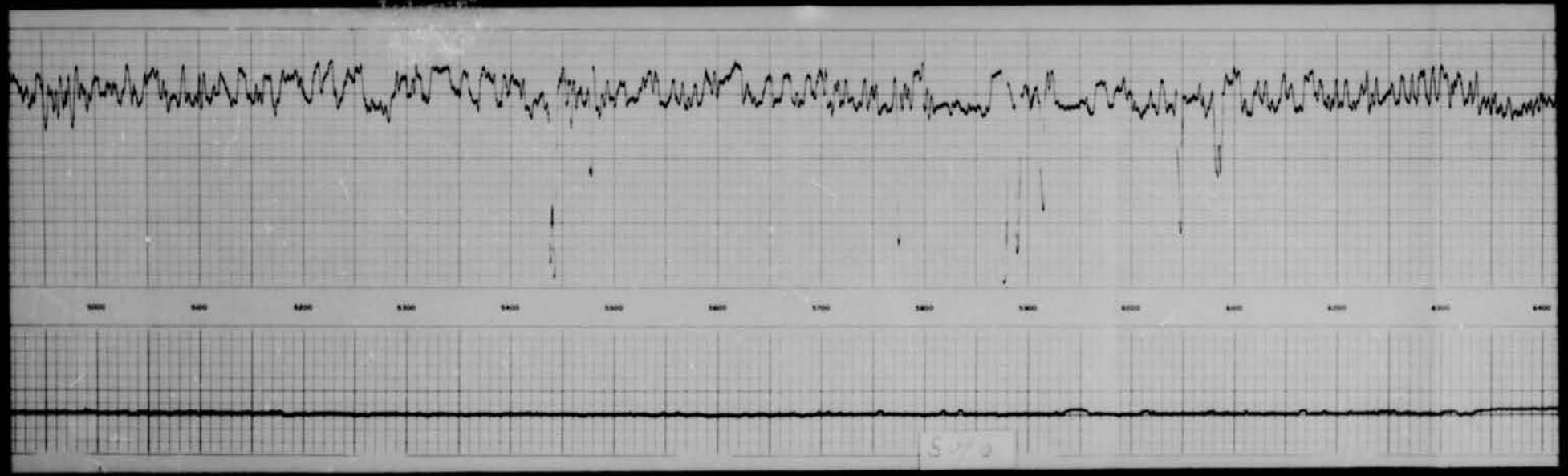


14

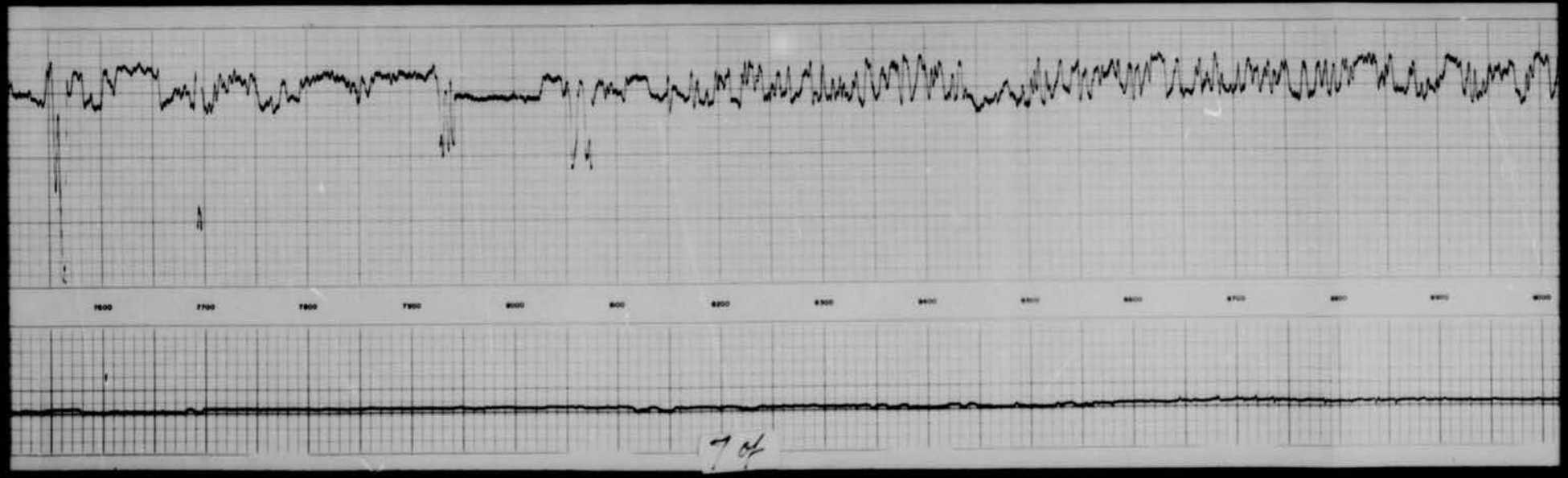

24

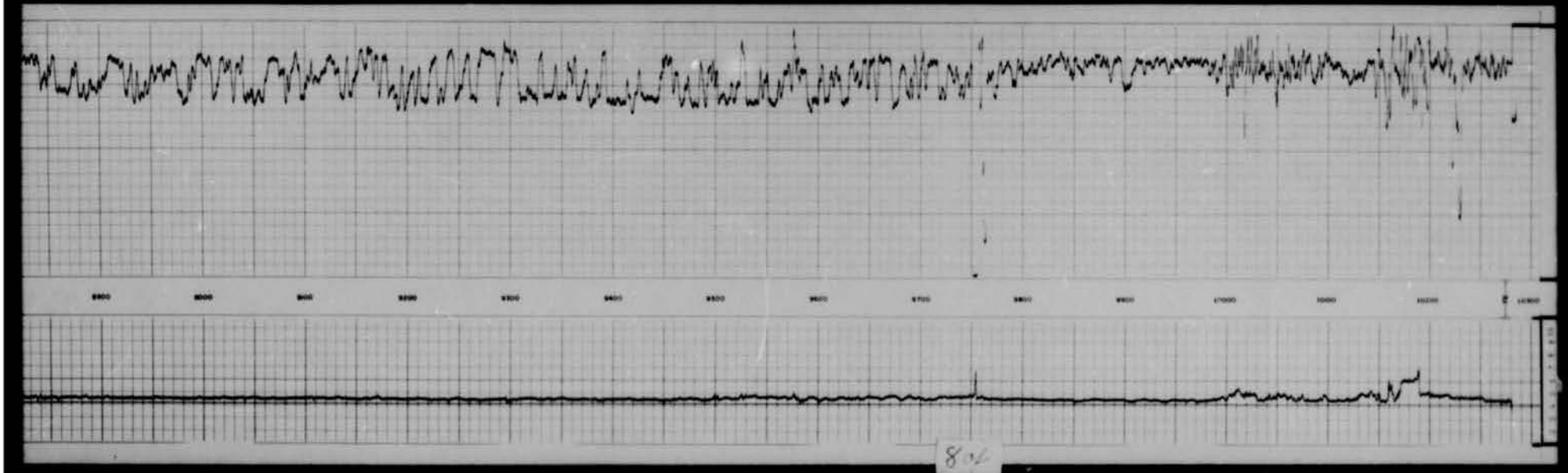

CALIPER
CALIPER


1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
4 of



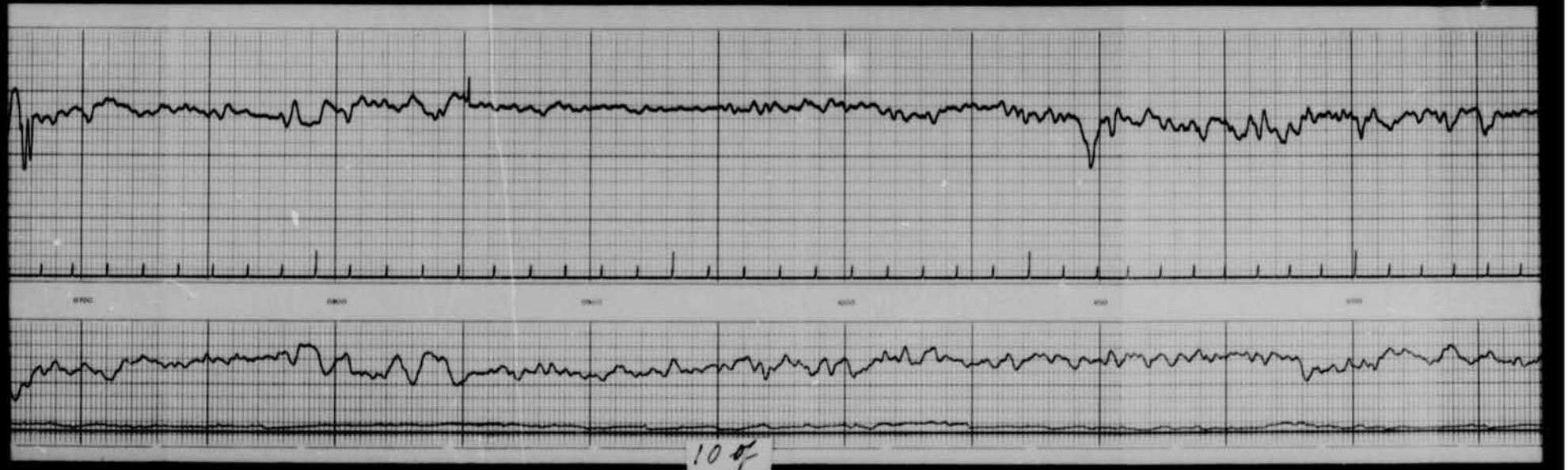

6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
64

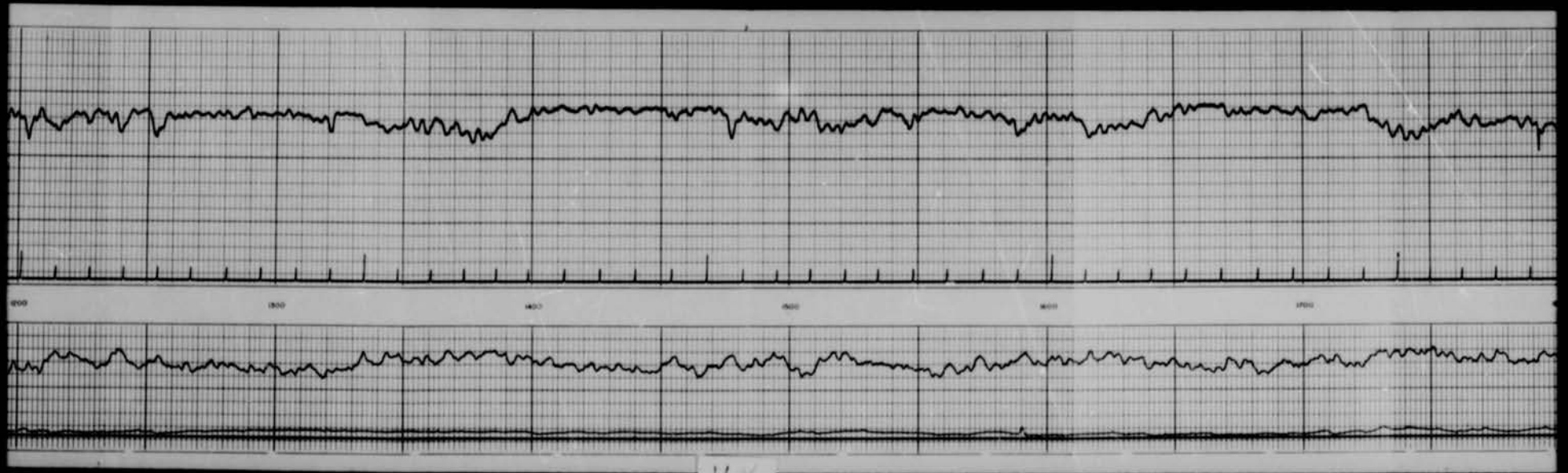

7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
8600
8700
8800
8900
9000
7 of



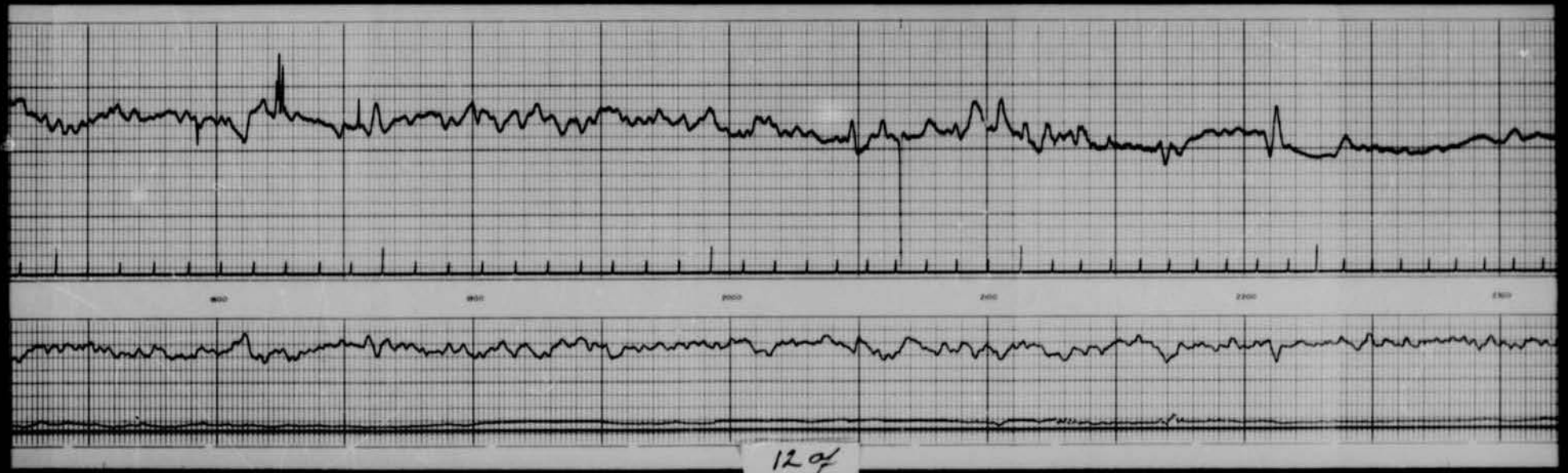
8

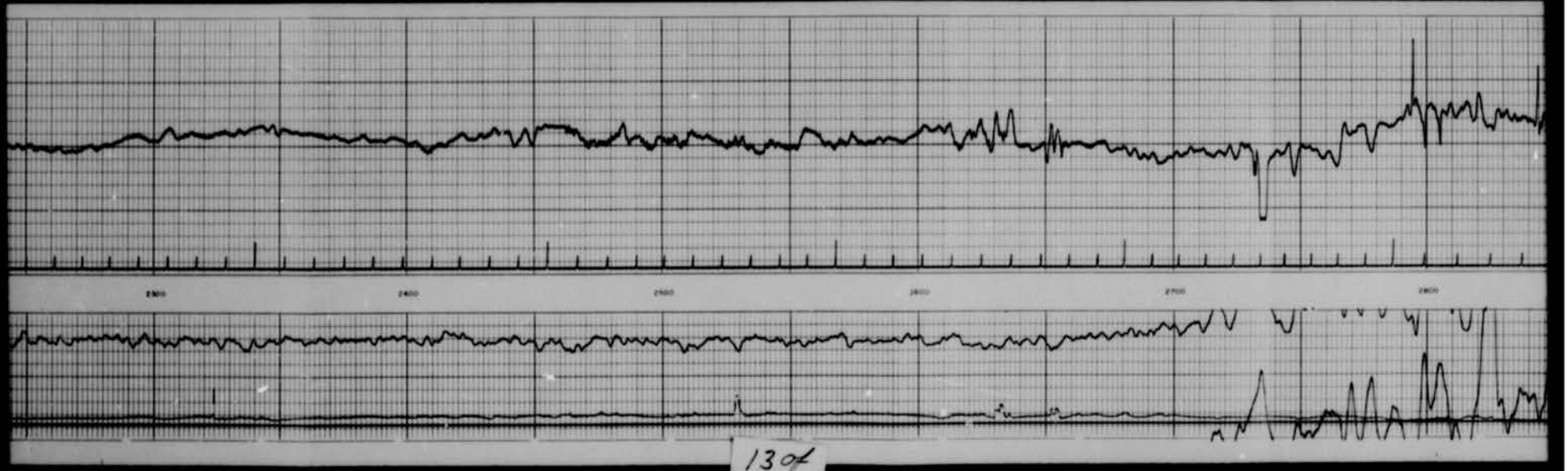

DEPTHS
DEPTHS
CALIPER
GAMMA RAY
SONIC INTERVAL TRANSIT TIME
DETAIL LOG
CALIPER
GAMMA RAY
SONIC INTERVAL TRANSIT TIME


10 of

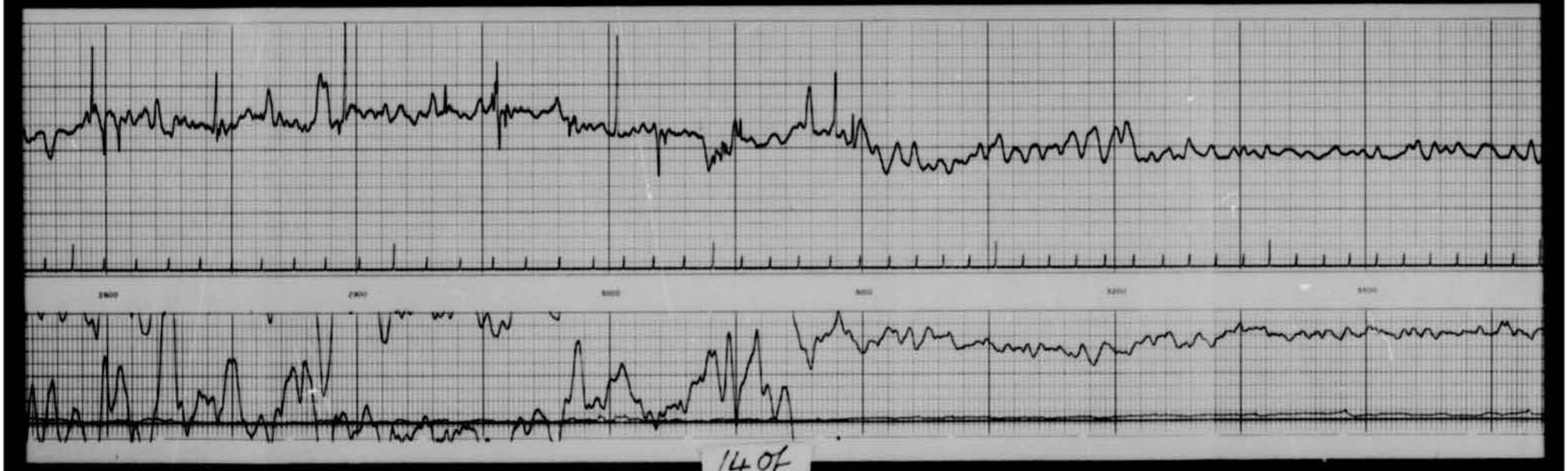


11 4


12 of

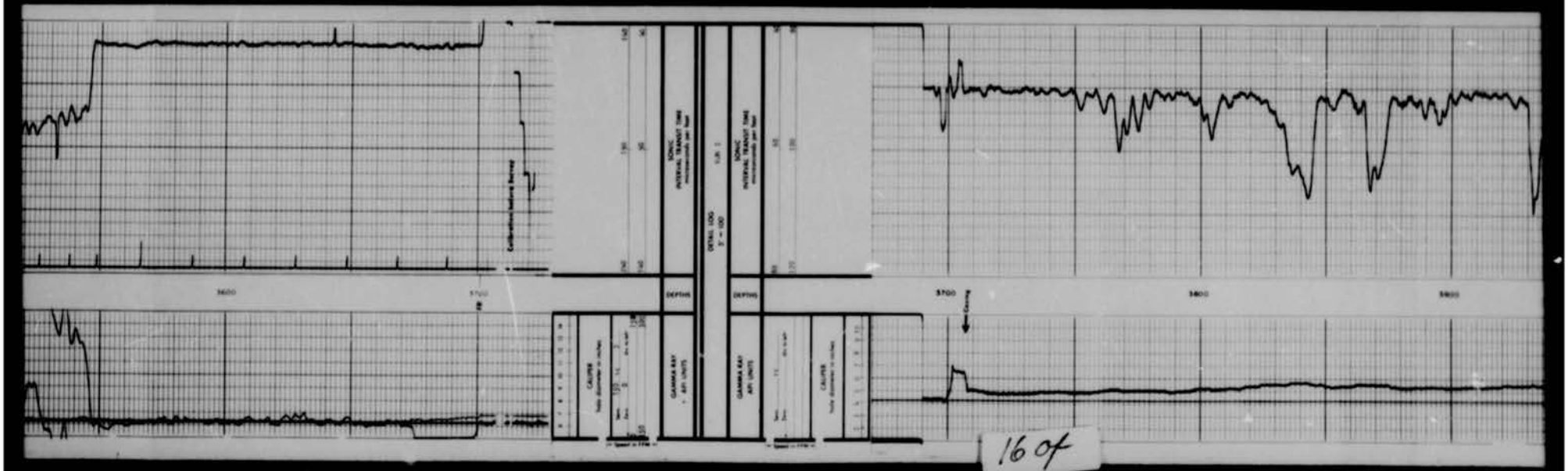


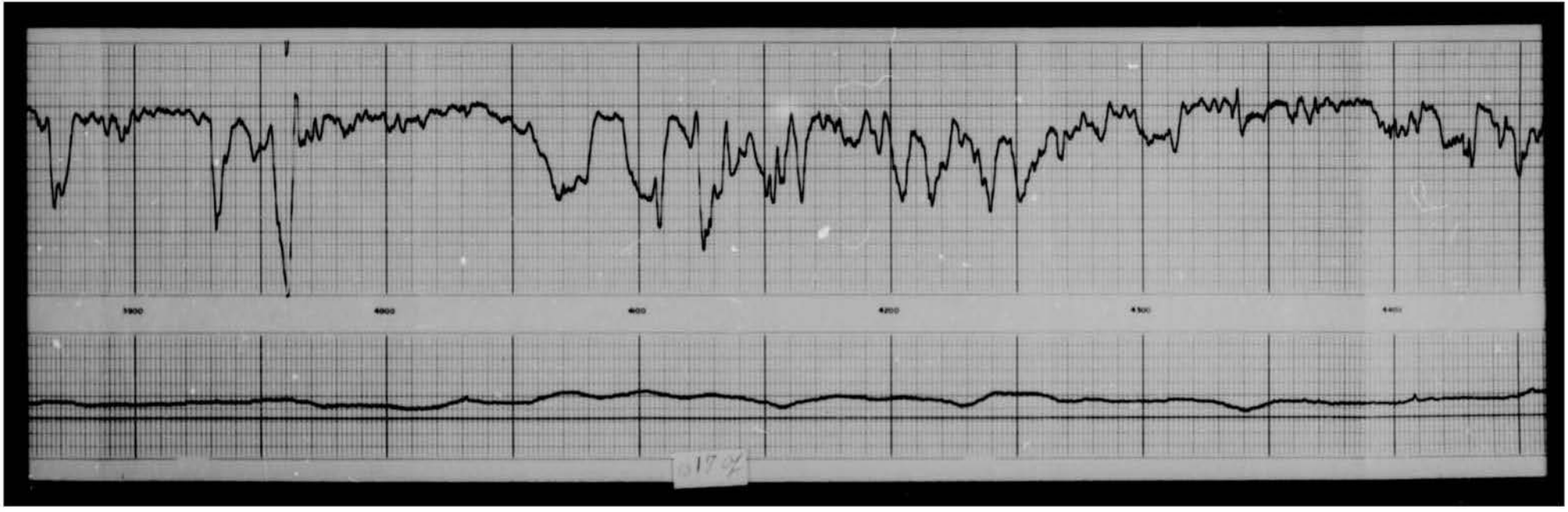
130

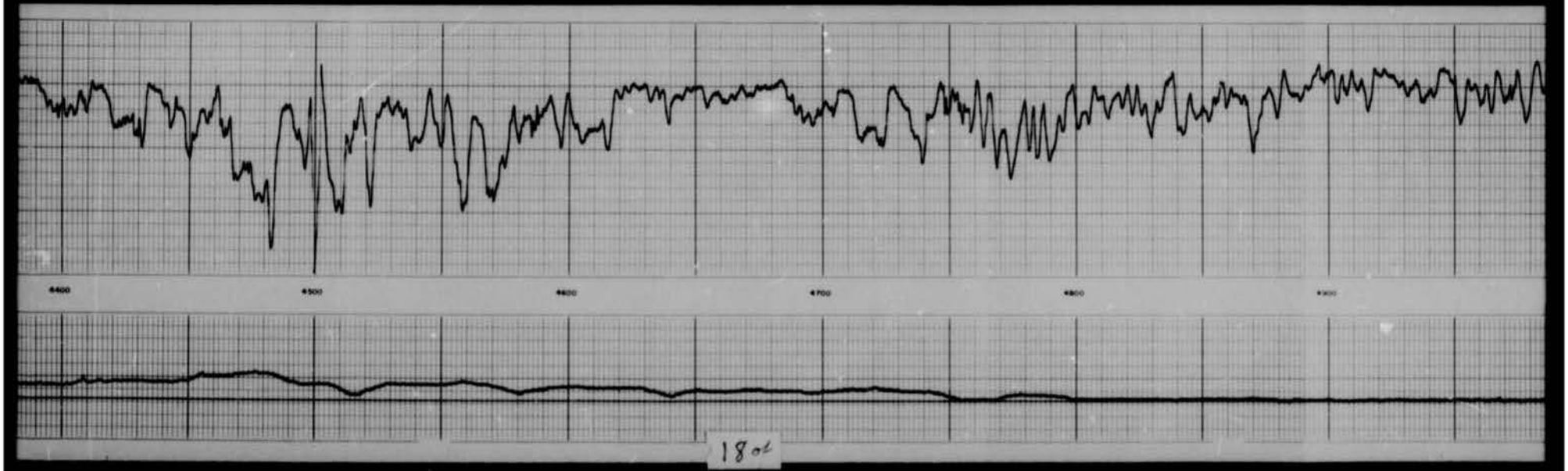


14 of

150f


Calibration before Survey
3600
3700
SONIC INTERVAL TRANSIT TIME microseconds per foot
DEPTHS
GAMMA RAY API UNITS
CALIPER hole diameter in inches
DETAIL LOG
S.R. 1
3700
3800
3900
Caving
16 of


3900
4000
4100
4200
4300
4400
0.17%


4400
4500
4600
4700
4800
4900
1802

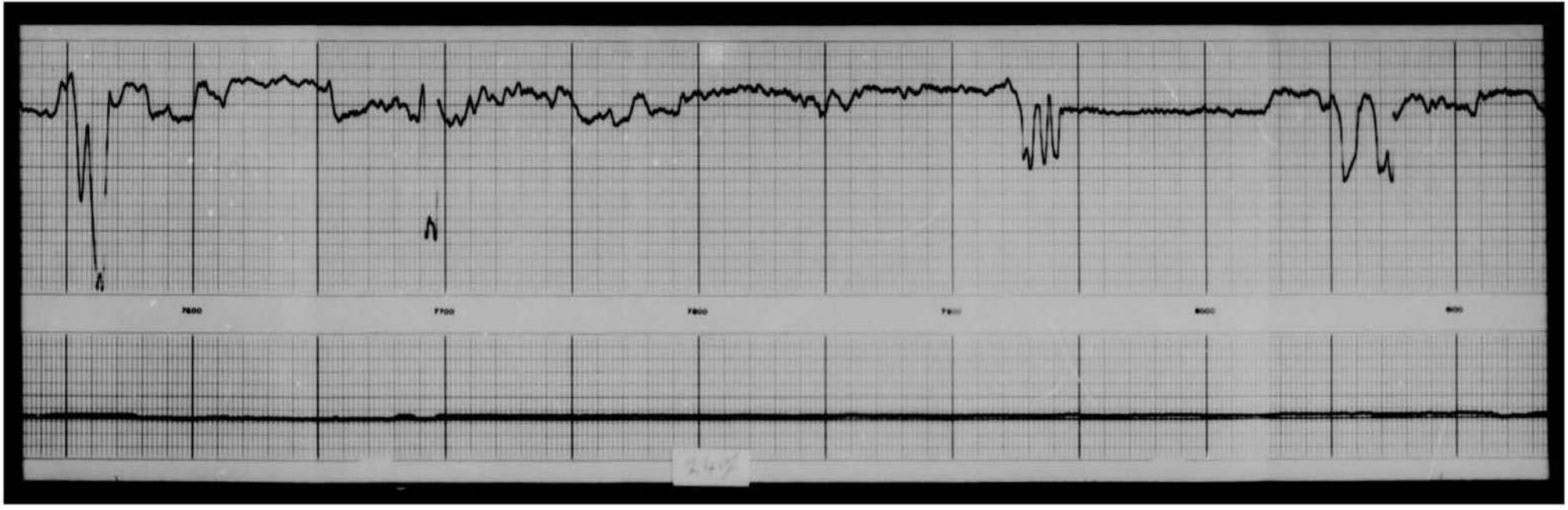

5000
5100
5200
5300
5400
5500
1934


5500
5600
5700
5800
5900
6000
20%

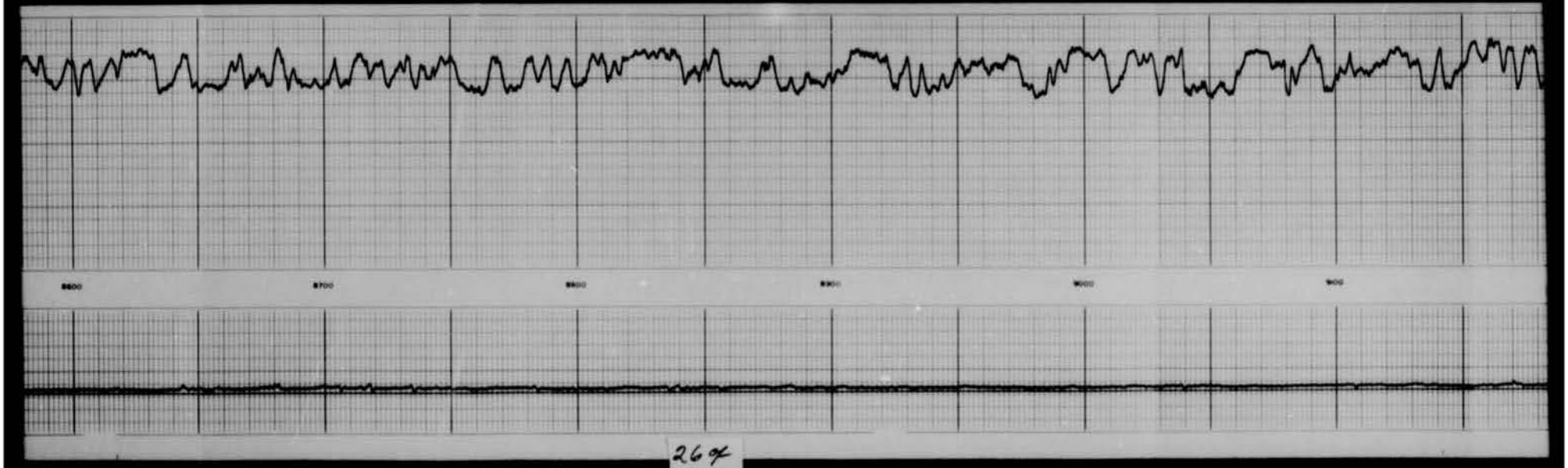

6000
6100
6200
6300
6400
6500
217


6500
6600
6700
6800
6900
7000
22

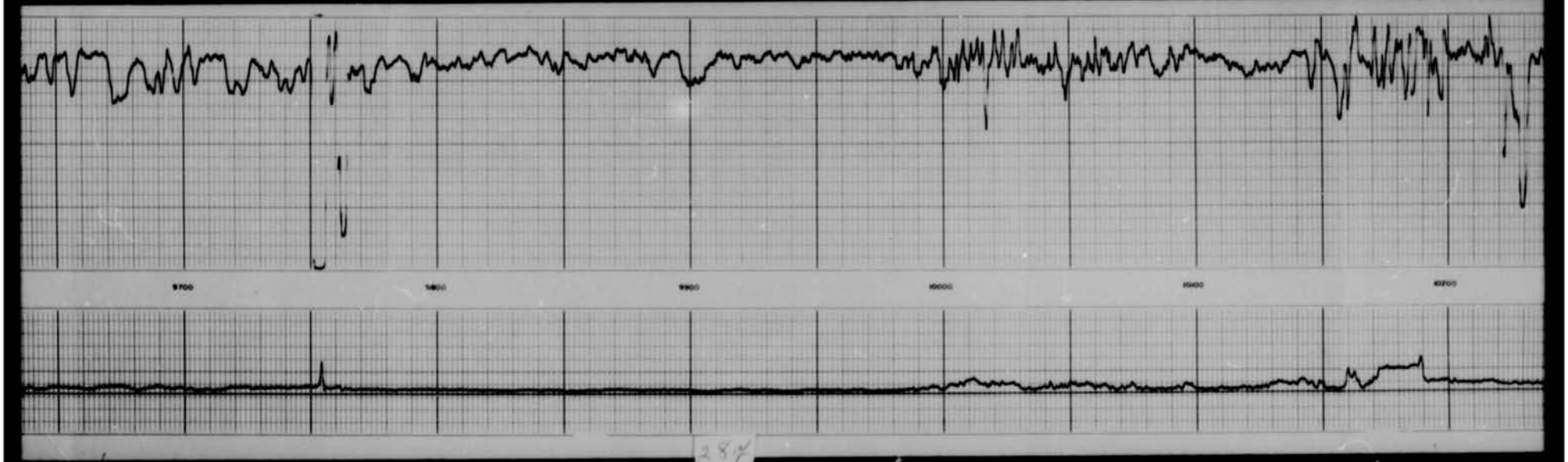

F100
F200
F300
F400
F500
F600


7600
7700
7800
8000

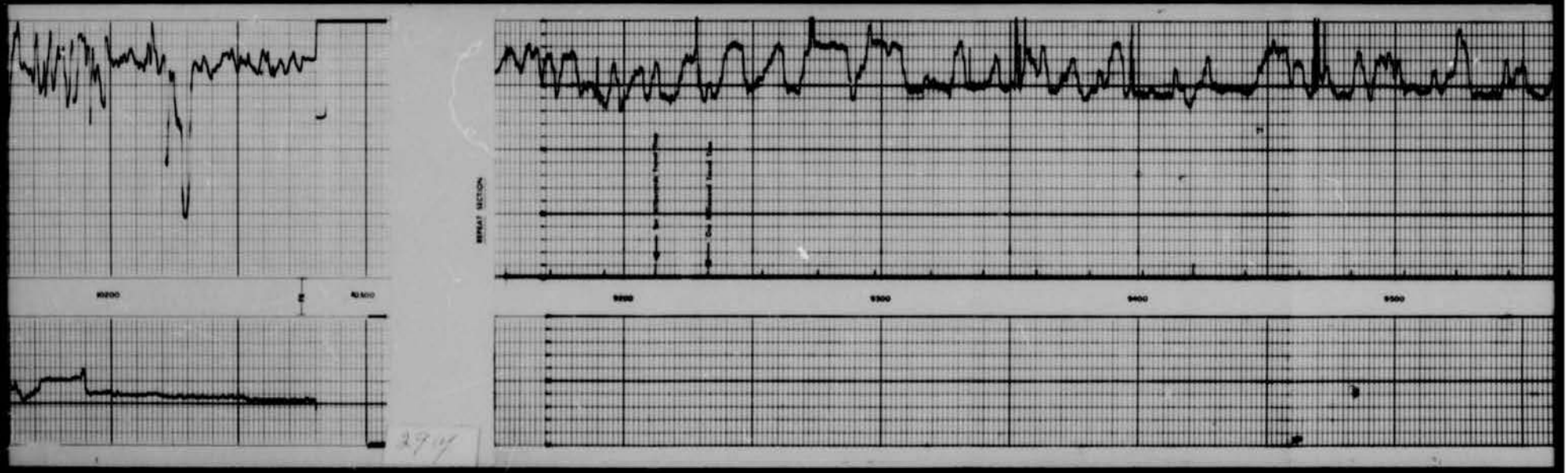

250

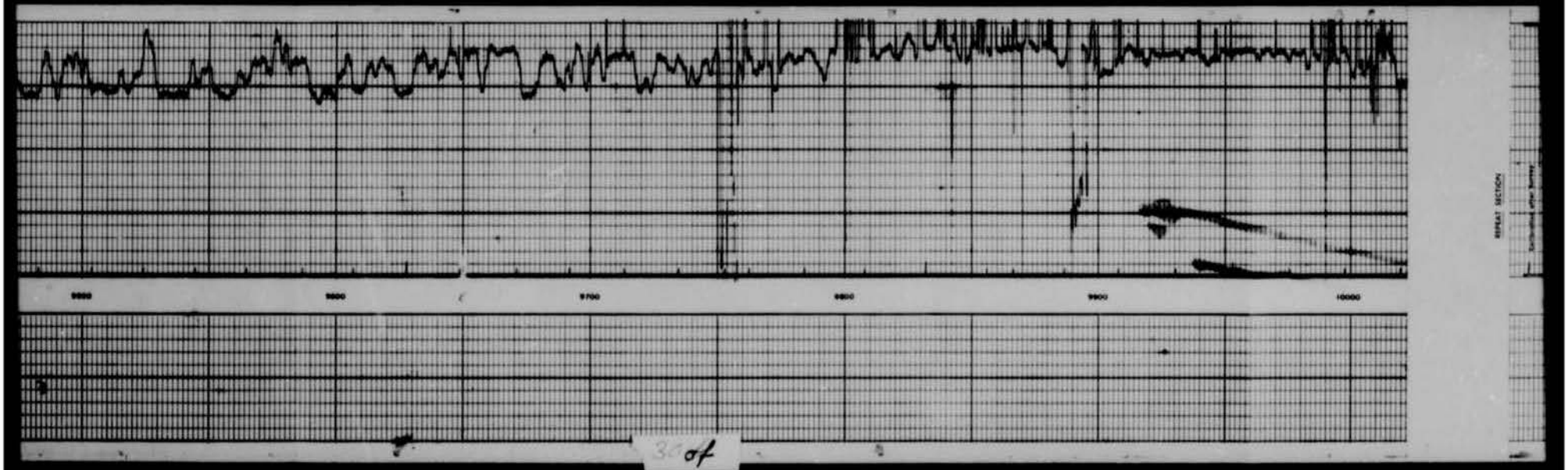

26%

27 of

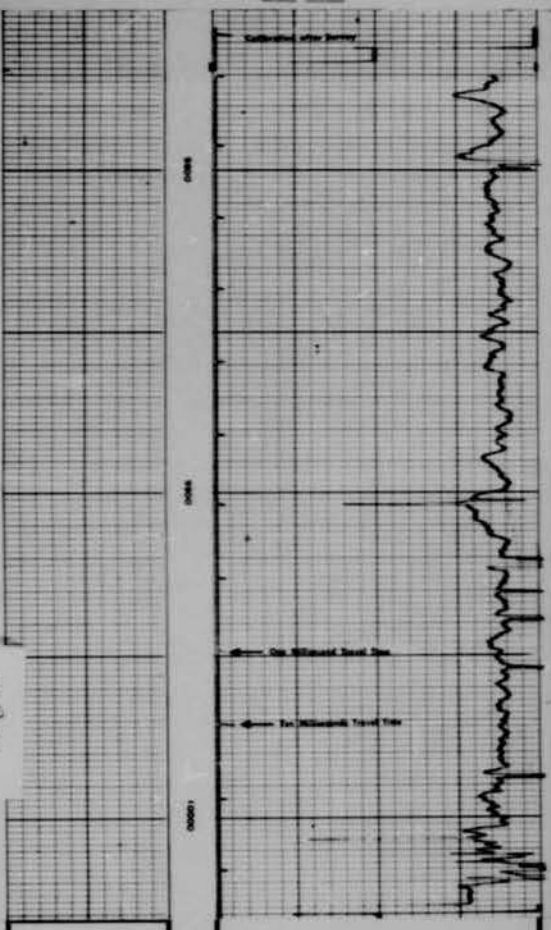


28

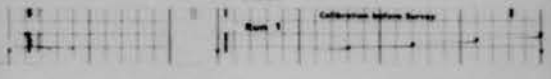

REPEAT SECTION
9200
9300
9400
9500


9600
9800
9700
9800
9900
10000
REPEAT SECTION
3 of

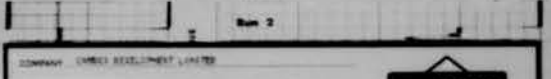
REPEAT SECTION



OVERLAP



OVERLAP



COMPANY CANADA DEVELOPMENT LIMITED

WELL CANADA ET AL DANGERINE A-43

FIELD WILDCAT PROVINCE NORTHWEST TERRITORIES

SCHLUMBERGER

31/31

Canden et al Dahadenni M-43

N-7940-1-482

Cerdin et al. Oklahoma M-43

M-T9 90-1-482

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

RIG NO 1141 LOCATION DAHADDIM ALBERTA NWT LSD SEC TWP RGE W DATE JAN 15 91

WELL CANADA M43. DRILLING CONTRACTOR MILES MOVED ROAD CONDITIONS

DATE JAN 15 RIG NO 1141

[redacted]

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

TOUR (1) MIDNIGHT 8 A.M. Hrs.

Driller G. Sanwald 3
Derrick
Motor R. Bacon 3
Floor Ivan Yarbin 8
Floor
Floor

INJURIES COMPLETE BELOW

TOUR (2) 8 A.M. 4 P.M. Hrs.

Driller G. Sanwald 11
Derrick Claude Palmer 14
Motor Floyd St Amant 14
Floor R. Lang 14
Floor Lorne Nelson 14
Floor Wayne Montgomery 16
Floor Pete Lebel 15

INJURIES COMPLETE BELOW

TOUR (3) 4 P.M. MIDNIGHT Hrs.

Driller
Derrick Lorne 12
Motor Lyon Yarbin 7
Floor L. Pickard 11
Floor R. Bacon 11
Floor

INJURIES COMPLETE BELOW

[redacted]

Position	Tour	Signature	Hrs

Testpusher Approval

SAFETY TALKS

Given By

Subject

№ 1335 HSW

PAYROLL

REMARKS

	START	TIME	HRS
Tail Down	12.00	8.00	
Removed used tanks pumps mudmixfoal det.			
FIRES			8

D. Sloan SIGNATURE

	START	TIME	HRS
Rigging down to shed	8.00	12.00	
FIRES			8

D. Sloan SIGNATURE

	START	TIME	HRS
Rig down to shed rig	4.00	12.00	
Power wash.			
Move out pumps and engines			
FIRES			8

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER IN

[redacted]

B.O.P. Tested Pressure Test Pipe Rams Blind Rams Pipe Rams Hydraulic Hoses Inspected Rig Saver Chk Rig Stand Chk Rotary Chock Chk Fire Bucket Chk

Fuel on Hand 12.01 a.m. Fuel Rec'd Today (add) TOTAL Fuel on Hand 11.59 p.m. (deduct) FUEL USED

FUEL USED

FUEL DELIVERED

CEMENT RETURNS

DAYS FROM SPUD

TOTAL COMPANY TIME HRS TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative E.R. Jepsen

Approved by Testpusher C. Palmer

DRILL PIPE Size Grade CLASSIFICATION 1 2 3 4 TOTAL Date Received Hr. Worked Since Received Total Hr. Worked CALIPER DATE RESULTS FROM PIPE BACK

№ 1335 HSW

HEAD OFFICE PAYROLL COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: CANDEX MM

11-11 DAHADINNI RIVER NWT — JAN 1971

REMARKS

START TO TAKE DOWN THE RIG (MOVING)

Rigging down to shot rig to the East 30' feet.

FIRES

Lost circulation in hole.
1-6"x10' bottom drill collar 4½" reg box x 4½" H90 pin
1-6"+10' drill collar 4½" H90 pin x 4½" H90 box.
1-6" OD Xover sub 4½" H90 pin x 4½" 1020 pin.
1-6" OD Xover sub 4½" 1020 pin x 4½" BWH BOX.
27 joints 4½" x 12' Schaffer drill pipe
External upset to 4½" OD
Tool handled to 5" OD

FIRES

TAKE DOWN RIG.

FIRES

TOUR 1 — 8 A.M. — 4 P.M.

Driller	G. Gringrich 8
Derrick	[illegible] 8
Helper	R. Brown 12
Floor	Ivan Gharbie 8

TOTAL HOURS COMPLETE BELOW

TOUR 2 — 4 P.M. — 8 P.M.

Driller	Ghost 12
Derrick	Claude Solomon 12
Helper	L. Lang 12
Floor	Gerry Lebel 12
Floor	Sam Nelson 12
Floor	Walter Lonstrope 12

TOTAL HOURS COMPLETE BELOW

TOUR 3 — 8 P.M. — MIDNIGHT

Driller	[illegible] 9
Derrick	C. Nelson 9
Helper	
Floor	Ivan Gharbie 9
Floor	
Floor	

TOTAL HOURS COMPLETE BELOW

Position	Hours	Signature	Hrs.

Toolpusher's Approval

SAFETY TALKS

Given By:

Subject:

B.O.P.

Fuel used

Equipment changed

Approved by Operator's Representative

Approved by Toolpusher

№ 1334 HSW

HEAD OFFICE PAYROLL COPY

№ 1334 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION DAHADINNI RIVER N.W.T. DATE JAN 13-71 TO 71 DATE JAN 13-71 RIG 11-11

DIRECTIONS TO WELL CANDER M-13

REMARKS

PREPARE TO CEMENT
WORK UP FISHING TOOL
PREPARE TO TOOL BOX UP
STORAGE CLEAN + MOVE OUT 12:00 8:00 8
TO PREPARE TO MOVE

FIRES

PREPARE TO CEMENT 4:00 8:00 4:00 8
CEMENT TO DRILL
CEMENT OFF HOLE
121 SACK CEMENT
(OVERTIME ON MOVE)

121 SACK PUMPED WITH CEMENT
1 SACK CALCIUM CHLORIDE USED

FIRES

CLEAN UP AFTER CEMENT 4:00 12:00 8
JOB START TO TAKE
DOWN SET UP.
CLEANING MUD TANK
PUMP TO BARGE 2000 GAL
INTO DRILLER TANK FOR
STORAGE

FIRES

EMPLOYEES IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT IF INJURY HAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

TOUR ① MIDNIGHT 8 A.M.	Hrs.
Driller G. Stringer	8
Derrick	
Motor Reuben Bayon	8
Floor Ivan Jardin	8
Floor	
Floor	

INJURIES COMPLETE BELOW

TOUR ② 8 A.M. 4 P.M.	Hrs.
Driller Alfred St. Amant	12
Derrick Claude Nelson	12
Motor R. Lange	12
Floor Larry Tilson	12
Floor Maple Snowtogo	11
Floor L. Pickard	10
Floor Pierre Lobel	11

INJURIES COMPLETE BELOW

TOUR ③ 4 P.M. MIDNIGHT	Hrs.
Driller G. Stringer	4
Derrick	4
Motor L. Pickard	12
Floor Ernest Jacobie	4
Floor	
Floor	

INJURIES COMPLETE BELOW

Position	Name	Signature	Hrs.

Toolpusher's Approval

SAFETY TALKS

Given By:

Subject:

B.O.P. Tested Opened Time Pipe Size Pipe & Bolt Inspected Date

Make
Pipe Rams
Blind Rams

Kelly Bushing Elev. 24 ft.

Fuel on Hand 12:01 a.m.
Fuel Rec. & Tanks (gal)
TOTAL
Fuel on Hand 11:59 p.m.
FUEL USED

Bit Size Make Serial No. Type Jets Total Miles Hours Bit Cost Bit Wt. Bit Life Hours Bit Life Feet Bit Life Cost

DRILL PIPE	Size	Grade	CLASSIFICATION 1	2	3	TOTAL	Days Behind	Ft. Drilled since Behind	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RATE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

DATE FROM WUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

№ 1333 HSW

HEAD OFFICE PAYROLL COPY

№ 1333 HSW

PAYROLL

FOOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION DAHADINNI RIVER N.W.T. DATE Jan 12 1971

DIRECTIONS TO WELL CANDEX MH3

402

No.	Size	Type	Serial No.	R.P.M.		
2	8¾	J4	460760	75	116	~~116~~ 304

REMARKS	START	STOP	HRS
Fishing for 4½ hrs	12.00	7.45	7¾
Rig Ser	7.45	8.00	¼

FIRES G. Stanger 5

REMARKS	START	STOP	HRS
Fishing broke off hook	8.00	12.00	4
Bailing mud out of hole	12.00	4.00	4
Check & up fishing tools	4.30	7.45	3¼
Rig Ser	7.45	8.00	¼
Hole abandoned at 4.30 ~~pm~~			

FIRES Phil St Amant 8

REMARKS	START	STOP	HRS
Bailing out mud from hole	4.00	4.30	½
Cleaning up fishing tools	4.30	7.45	3¼
Rig Ser.	7.45	8.00	¼
	8.00	12.00	4
Wait on abandonment program			

FIRES G. Stanger 8

EQUIPMENT CHANGES

DATE ______ RIG # ______

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT; IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

TOUR ① MIDNIGHT 8 A.M.	Hrs.
Driller G. Stanger	8
Derrick Leo Pickering	8
Motor C. Perron	8
Floor Ivan Yankin	8
Floor	
Floor	

INJURIES COMPLETE BELOW

TOUR ② 8 A.M. 4 P.M.	Hrs.
Driller Phil St Amant	12
Derrick Claude Gilmore	12
Motor R. Franz	12
Floor Lorne Nelson	9
Floor Mutt Lautaopa	10
Floor	
Other Dinny Babel	10

INJURIES COMPLETE BELOW

TOUR ③ 4 P.M. MIDNIGHT	Hrs.
Driller G. Stanger	4
Derrick Ryan Bacon	12
Motor	
Floor Ivan Yankin	4
Floor Jack Perron	4
Floor	

INJURIES COMPLETE BELOW

SAFETY TALKS

Given By

Subject

Toolpusher Approval

2 ... 24

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative G. Layse

Approved by Toolpusher C. Hansen

HEAD OFFICE PAYROLL COPY

№ 1332 HSW

№ 1332 HSW

PAYROLL

POOR COPY

KEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

Rig No. 11-11 Location DAHADINNI RIVER N.W.T. Date JAN 11 1971

Directions to Well CANDEX MH3

Date JAN 10 71 - 11 71

Tour 1 (Midnight – 8 A.M.)

402

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.		
2	9 7/8		R	[illegible]			116	20 1/4

Weight 8.75 · Viscosity [illegible] · Degasser Hours On 8

Additives: 6 SACKS SALT 2 SACKS 26 ogel 1 [illegible] 2.1

Remarks	Start	Stop	Hrs.
Fishing for 4 1/2 O.D. pipe	12.00	2.30	1/2
Mixing mud	12.30	1.30	1
Fishing	1.30	4.00	2 1/2
Testing + Repair Fishing Tools	4.00	6.00	2
Bailing out Hole Amg	6.00	7.45	1 3/4
gel plug washed out.			
Rig S&R.	7.45	8.00	1/4
Fires — G. Stawaga			8

Tour ① Midnight – 8 A.M.		Hrs.
Driller	G. Stawaga	8
Derrick	[illegible]	8
Motor	Ken Pickering	8
Floor	Ivan Yaschi	8
Floor		
Floor		

(EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT; IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY)

INJURIES COMPLETE BELOW

Tour 2 (8 A.M. – 4 P.M.)

402

Serial No.	R.P.M.		
[illegible]	74	116	20 1/4

General: 2 Drums [illegible] Cans [illegible] 3 Sacks AMG

Remarks	Start	Stop	Hrs.
Bail out Hole + Mix Amg	8.00	12.00	4
Wait on Amg Plug To set	12.00	1.00	1
Drill Amg [illegible] Run in	1.00	3.00	2
1 More Amg Plug. Did not			
Hold			
Fishing	3.00	4.00	1
(Carry on 12 HRS Shift			
with fishing)			
(Mixing new while			
fishing)			
Fires — [illegible]			8

Tour ② 8 A.M. – 4 P.M.		Hrs.
Driller	[illegible]	12
Derrick	Claude Delisnes	12
Motor	R. Franz	12
Floor	Larry Niles	11
Floor	Martin Gustafson	[illegible]
Floor		
Other	Pierre Label	10

INJURIES COMPLETE BELOW

Tour 3 (4 P.M. – Midnight)

402

Remarks	Start	Stop	Hrs.
Fishing	4.00	7.45	3 3/4
Rig S&R	7.45	8.00	1/4
Fishing	8.00	12.00	4
Fires — G. Stawaga			8

Tour ③ 4 P.M. – Midnight		Hrs.
Driller	G. Stawaga	4
Derrick	Myram Bruce	12
Motor	[illegible]	4
Floor	Ken Pickering	4
Floor	T. Pichard	12
Floor	Ivan Yaschi	4

INJURIES COMPLETE BELOW

Used Rings on Bit # 2 · Hours Operated 24

Equipment Changes

Approved by Operator Representative E.K. Layad

Approved by Toolpusher C. [illegible]

Safety Talks

Given By

Subject

Nº 1331 HSW

Nº 1331 HSW

PAYROLL

HEAD OFFICE PAYROLL COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION ADIRONDACK RIVER #47 DATE JAN 10 1971 DATE JAN 12 71 RIG # 11-11

DIRECTIONS TO WELL CANOE M43

REMARKS	TIME START	TIME STOP	HRS
Setting up to pull tools	12.00	1.30	1½
Tank down guys) Rigging up	1.30	3.00	1½
Fishing for drill collars	3.00	4.00	1
Mixing mud.	4.00	7.45	3¾
(Mud hose plugged, pump will not pump fresh water without suction)	7.45	8.00	¼
Rig Sick			
FIRES			5

REMARKS	TIME START	TIME STOP	HRS
Bail mud out of hole to run AMP Orientation.	8.00	10.00	2
Mix mud	10.00	11.00	1
Mix AMP + put down hole	11.00	3.45	4¾
Rig Sick	3.45	4.00	¼
Got all down on 12 hrs. Smoke down Crew - sick. Start with AMP. To seal connection;			
FIRES			5

REMARKS	TIME START	TIME STOP	HRS
Waiting on AMP	4.00	4.30	½
Drill out AMP. No good	4.30	5.00	½
Bail out hole	5.00	6.00	1
Put AMP down hole	6.00	7.00	1
Drill out AMP Orientation plug	7.00	8.00	1
Prepare to run overshot -	8.00	9.00	1
- fishing tool	9.30	10.00	½
Fishing for AMP tools	9.00	12.00	3
FIRES			5

[redacted]

EMPLOYEE IS REQUIRED TO SIGN PERSON KEEP AT THE COMPLETION OF EACH SHIFT. IF INJURY HAS RESULTED SIGN AT BOTTOM OF SHEET ONLY

TOUR 1 MIDNIGHT 8 A.M.	Hrs.
Driller G. Sewell	8
Derrick	8
Helper Mr Pickering	8
Floor Ivan Yerk	8
Floor	
Floor	

INJURIES COMPLETE BELOW

TOUR 2 8 A.M. 4 P.M.	Hrs.
Driller Fred J. Clement	12
Derrick Claude Nelson	12
Helper R. Franz	12
Floor Reggie Bond	12
Floor Larry Nichols	14
Floor Martin Lustrogg	16
Floor Gerard Lobell	16

INJURIES COMPLETE BELOW

TOUR 3 4 P.M. MIDNIGHT	Hrs.
Driller G. Sewell	4
Derrick	4
Helper Jim Pickering	4
Floor Ivan Yerk	8
Floor J. Sebour	10
Floor	

INJURIES COMPLETE BELOW

Position	Hrs.	Signature	Hrs.

Tailpushers Approved

SAFETY TALKS

Given By

Subject

B.O.P.	Tested	Required Time	Pull-back	Parking & Spot Inspected Daily
Model				
Pipe Rams				
Blind Rams				

LOSS BIND ON BIT # 2 Bit Hours Operated 24 Hrs.

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Stress Relieved	Pin Worked when Needed	Tested to Spec.	CALIPER DATE	RESULTS	FROM PIPE RACK

Fuel on Hand 12:01 a.m. ____ gals.

Fuel Rec. & Taken (add) ____ gals.

TOTAL ____ gals.

Fuel on Hand 11:59 p.m. (subtract) ____ gals.

FUEL USED ____ gals.

Kelly Cock Ck. #

Kelly Cock Ck. #

Pipe Racks Ck. #

[redacted]

BBL. IN ____ FOR ____

FO. USED ____ TAX ____ CBM ____

FUEL USED ____ P.M. ____

CEMENT RETURNS ____ YES NO

DATE FROM SPUD

EQUIPMENT CHANGES

TRANSFER #

TOTAL COMPANY TIME ____ HRS. TOTAL CONTRACTOR'S TIME ____ HRS.

Approved by Operator's Representative E. Lapp

Approved by Toolpusher E. Johnson

HEAD OFFICE PAYROLL COPY

№ 1329 HSW

№ 1329 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG No. 11-11 LOCATION DAMADINA, RIVER NWT LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE Jan 9 1971

DIRECTIONS TO WELL: CANDEX M43

MAILING POINT ___ SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

REMARKS

Run in over shot fish fish tool
4 walk hack 12.00
Times fishing 7.45 7.00 7½
Rig Sick.

Change slips (Part 2)
Reassembled equipment & cleaning
FIRES

Fishing with overshot 8.00 10.00 2
Trying to start [illegible]
and back out [illegible]
[illegible] & mix mud 3.45 5½
Rig Sick 3.45 4.00 ½

Tractors hauling water
[illegible]
other trucks working on
[illegible]
FIRES

Mix & pump cement 10.00 5.00 1
[illegible]
Fix drain stacks & manifolds
Set up gas detector 7.00 3
[illegible] 7.00 10.00 2
[illegible]
[illegible] 10.00
[illegible]
[illegible] 12.30 2
[illegible]
FIRES

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY HAS RESULTED SIGN AT BOTTOM OF SHEET ONLY

TOUR 1 MIDNIGHT 8 A.M.

		Hrs.
Driller	G. Gendron	8
Derrick	C. Pearson	12
Motor		
Floor	Ivan Yankie	8
Floor		
Floor		

INJURIES COMPLETE BELOW

TOUR 2 8 A.M. 4 P.M.

		Hrs.
Driller	John C. Arnold	8
Derrick	Claude Nelson	8
Motor	R. Franz	8
Floor	Larry Nielsen	8
Floor		
Floor	Felipe Lobat	11
Floor	Ken Hickman	4

INJURIES COMPLETE BELOW

TOUR 3 4 P.M. MIDNIGHT

		Hrs.
Driller	Ken Hickman	8
Derrick	Ressan Bhoon	16
Motor	Martin Lantzop	11
Floor	J. Packard	8
Floor		
Floor		

INJURIES COMPLETE BELOW

Position	Signature	Hrs.

Transactions Approved

SAFETY TALKS

Given By:

Subject:

Nº 1328 HSW

PAYROLL

B.O.P. Tested ___ Required Time ___ Pressure ___ Packing & Seal Inspection Date ___

Casing in well: Size # ___ Rig Serial No. Size # ___ Mech. Cond. Size # ___ Pipe Stack Size # ___

Fuel on Hand (12:01 a.m.) ___ gals
Fuel Rec. & Taken (+add) ___ gals
TOTAL ___ gals
Fuel on Hand 11:59 p.m. (deduct) ___ gals
FUEL USED ___ gals

RIG ___ HR. USED ___ KW ___ KW

FUEL STARTS ___ P.M. ___ P.M.

CEMENT RETURNS ___ (YES - NO)

DATE FROM SPUD ___

TOTAL OPERATOR TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

Approved by Operator's Representative: [signature]

Approved by Toolpusher: [signature]

LOGS RUN ON M.F.E. 7 Date Received 24 Hrs.

DRILL PIPE	Size	Grade	CLASSIFICATION 1	2	3	TOTAL	Date Entered	No. Joints Since Inspection	Total No. Joints	CALIPER DATE	RESULTS	NEW PIPE BACK

EQUIPMENT CHANGES ___ HOURS ___

Nº 1328 HSW

HEAD OFFICE PAYROLL COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: CANDEX M #3

WELL NO. 11-11 LOCATION: DARADINNI RIVER LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE: JAN 8 1971

MAILING POINT ___ SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

DATE: JAN 8 WELL NO. 11-11

Time	Remarks	Hours
12.00 – 8.00	STAND BY WAIT FOR FISHING TOOLS BAILING OUT BASEMENT REPAIRING WHEATLY PUMP	
8.00 – 9.00	CLEANING OUT BASEMENT SUMP	1
9.00 – 1.00	MIXING MUD.	4
1.00 – 3.45	BREAKING UP CEMENT	2¾
3.45 – 8.00	RIG. SER.	¼
	REPAIR PUMPS	
11.00 – 6.00	BREAKING UP CEMENT IN BASEMENT TO CUT OFF LOSS OFF MUD	2
6.00 – 8.00	CEMENTING IN BARRELS IN BASEMENT.	2
8.00 – 12.00	PREPARING TO RUN FISH & FISHING FOR BROKEN TOOL JOINTS.	4

FIRES: L. Sherwood

FIRES: Blackfoot Reserve

FIRES: Alex Pickering

[redacted]

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY HAS OCCURRED SIGN AT BOTTOM OF SHEET ONLY

TOUR 1 MIDNIGHT 8 A.M. — No.

Driller: G. Spinger 8
Derrick: C. Perron 8
Helper: Juan Gardin 8

INJURIES: COMPLETE BELOW

TOUR 2 8 A.M. 4 P.M. — No.

Driller: Blood St Cement 8
Derrick: Glenda Helmer 8
Helper: R. Fagg 8
Helper: Harry Nielsen 11
Helper: Martin Fostertop 9
Helper: Pierre Gabel 10

INJURIES: COMPLETE BELOW

TOUR 3 4 P.M. MIDNIGHT — No.

Driller: Joe Pickering 8
Derrick: Russell Pearce 8
Helper: J. Richard 8

INJURIES: COMPLETE BELOW

[redacted]

Position	Hours	Signature	No.

Toolpusher: Approved:

SAFETY TALKS

Given By: ___

Subject: ___

Approved by Operator's Representative: G. R. Lynch

Approved by Toolpusher: C. Anderson

[redacted]

Drill Pipe	Size	Grade	Classification 1	2	3	Total	Bore Balance	Ft. Drilled Since Bearing	Total Ft. Drilled	Caliper Date	Results	Hours Since Pull Back

Equipment Changes: ___ Transfer #: ___

Date from Spud: ___ Total Operator Time: ___ Total Contractor Time: ___

Cement Returns: ___ Fuel Used: ___

HEAD OFFICE PAYROLL COPY

№ 1327 HSW

№ 1327 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: CANDEX M43

RIG NO. 11-11 LOCATION: DAHADINNI RIVER LSD SEC TWP RGE W DATE JAN 7 1971

DATE JAN 7-71 RIG 11-11

402

2 94 ft 660706 119 247

WEIGHT / VISCOSITY / GEL: 80

W.L. F.C. pH SOLIDS: Mech. Chr. Q. Flow Q. Flow

REMARKS

	Start	Stop	Hrs.
STAND - BY	12:00	7:45	7½
CLEAN UP STACK TOP	7:45	8:00	¼
BOX IN SHANDY HOUSE			
CHANGE SAW OUT OFF TANK			
(BELOW SHALE SHAKER)			

FIRES: Dr. Strong C

402

STANT BY W/ TUG DR FISHING TOOLS & FISHING MAN 8:00 9:30 1½

TRIP IN TO PICK FOR FISH WITH SPEAR TOOL - NO FISH 9:30 4:00 2½

REPAIR HOOK TONG CHAIN W/ WELDER

FIRES: Blackett's Crane S

TRIP IN WITH OVER SHOT TO PICK FOR FISH WENT BY W/ FISHING TOOL & MAN 4:00 5:00 1

MIXING MUD 5:00 12:00 7

BAKING OUT EQUIPMENT

Conductor pipe cement failed, when pulling it we lost of pulled pipe from hole

Pipe out Conductor Pipe.

FIRES: Van Brokeny S

36 SACKS MUD 1 SACK QUICK TREAT

EQUIPMENT CHANGES

B.O.P. Tested Blowout Drill Pressure & Leak Inspection Date

Fuel on Hand 5:00 a.m. gals. Fuel Rec. (Today) gals. TOTAL gals. Fuel on Hand 11:59 p.m. (Tonight) gals. Fuel used gals.

Rig Service Time Drill Time Bailing Time Circ. Time

Bit No. Size Type Serial No. Depth Out Footage Hours Cum. Footage Cum. Hours Dull Char.

Mud Pumps: No. 1 Size Stroke No. 2 Size Stroke

Pump Pressure Pump Output Bbl. Gal.

Drill Collars: No. Size Length

Drill Pipe: Size Grade Class

Bit Weight Rotary Speed Pump Pressure Pump Output

Mud Pump Operation: 24 hrs.

Used Rigs on Bit #: 2

Drill Pipe Size Grade Class 1 2 3 4 Total Date Received Pr. Burst Lined Burst Total Hrs. Drilled Caliper Date Results Made Into Pipe Rack

Date from Spud

Total Contractor Time hrs. Total Contractor's Time hrs.

Approved by Operator's Representative

Approved by Toolpusher: C. Stevenson

Employees to sign within hour of the completion of each shift. If injury has occurred sign at bottom of sheet only.

TOUR (1) MIDNIGHT 8 A.M. Hrs.

Driller: G. STANGER 8
Derrick: [illegible] 8
Motor:
Floor: Ivan Gaskin 8
Floor:
Floor:

INJURIES - COMPLETE BELOW

TOUR (2) 8 A.M. 4 P.M. Hrs.

Driller: Neal L. Bennett 8
Derrick: Claude Helmer 8
Motor: R. Lang 8
Floor: Larry McLean 16
Floor: Martin Santopio 16
Floor:
Floor: Pierre Lalal 16

INJURIES - COMPLETE BELOW

TOUR (3) 4 P.M. MIDNIGHT Hrs.

Driller: [illegible] 8
Derrick: Jerry Barr 8
Motor: Lee Richard 8
Floor:
Floor:
Floor:

INJURIES - COMPLETE BELOW

Position | Name | Signature | Hrs.

Toolpushers Approval

SAFETY TALKS

Given By:

Subject:

Nº 1326 HSW

PAYROLL

HEAD OFFICE PAYROLL COPY

Nº 1326 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG — RIG NO. 11-11 — LOCATION: DAHADINNI RIVER N.W.T. — DATE: JAN 6 1971

DIRECTIONS TO WELL: CANDEX M43 — MOVING FROM: — SHOVING FROM: — MILES MOVED: — ROAD CONDITIONS:

From	Footage	To	Hrs. on Bottom	Drill Collars No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	Total Drill Pipe
341	4	376	3	2	6		10	1000		24
370	22	392	14½	2	6		10	2000		2
392	10	402	1¾	2	6		10	2000		16

Bit No.	Size	Type	Serial No.	Wgt.	R.P.M.	Bit Cond.	Nozzles	Pump Pressure	R.P.M.	Pump Output	T.	B.	G.
2	8¾	FC	640766	11-20	75	86	104						
2	8¾	FC	640766	11-20	75	106	14						
2	8¾	FC	640766	11-20	75	116	24						

Mud	12 a.m.	4 a.m.	8 a.m.	12 noon	4 p.m.	8 p.m.	12 midnight
Weight		14.4					
Viscosity		25					
Gel							
Weight		11.4	11.1	11.2			
Viscosity		74	44	63			
Gel							
Weight		14.4					
Viscosity		40					
Gel							

Additives: — General: 1 SHALE SHAKER SCREEN

Additives: — General:

Additives: — General:

Time	Remarks	Hours
12	CHANGE SCREEN ON SHALE SHAKER	1
1.00	CLEAN SAND OUT OF WELL TO TOP	3.15
3.15	DRILLING	4.45
4.45	ADD MUD.	3.30
3.30	DRILLING	6.00
6.00	REPAIR HYDRAULIC HOSE ON DRILLER	6.45
6.45	DRILLING	7.45
7.45	RIG SER.	8.00
8.00	CLEAN PUMPS (SAND)	9.00
9.00	DRILLING	10.15
10.15	CLEAN SAND, MAKE SCREENS FOR SHALE IN MUD TANK	12.15
12.15	DRILLING	3.45
3.45	RIG SER.	4.00
4.00	CLEAN OUT BOTH PUMPS	5.00
5.00	ADD MUD	6.15
6.15	DRILLING	6.45
6.45	BIT WO TROUBLE IN HOLE.	8.30
8.30	TRIP OUT, NO BRAKE OFF AT LEFT	9.00
9.00	CLEAN UP SUCKER ROD, PUMP	12.00
	DRILL SHELTER (STAND BY)	

Fires: — Fires: — Fires:

Equipment Changes: — Transfer #

Days from spud: — Total Company Time: — Total Contractor's Time:

Approved by Operator's Representative: — Approved by Toolpusher:

Employee is required to sign personally at the completion of each shift. If injury has occurred sign at bottom of sheet only.

Tour (1) Midnight 8 a.m.	Hrs.
Driller G. Spangler	1
Derrick C. Tenn	11
Motor	
Floor Ivongandie	8
Floor	
Floor	

Hours complete below

Tour (2) 8 a.m. 4 p.m.	Hrs.
Driller Fred L. Broad	8
Derrick Claude Gilmore	8
Motor R. Fagg	8
Floor Larry Miller	13
Floor	
Floor Maurice Tompkins	14
Floor Pierre Lebel	14

Hours complete below

Tour (3) 4 p.m. Midnight	Hrs.
Driller Hughie Higgins	8
Derrick Hogan Holm	11
Motor Lodiment	8
Floor	
Floor	
Floor	

Hours complete below

Position	Tour	Signature	Hrs.

Toolpusher's Approval

Safety Talks

Given By:

Subject:

№ 1390 HSW

PAYROLL

B.O.P. Tested — Blowout Drill — Pipe Valve — Kelly & Bell Inspected Both

Kelly Bushing — Rotary Table — Ground Level — Drill Floor — Derrick Floor — Elevation

Feet on Board (2.01 a.m.) — Feet Run & Today (Add) — TOTAL — Feet Left (24 p.m. Deduct) — Fuel Used — Cement Returns

Rig Down Time — Rig Down Time — Rig Down Time — Rig Down Time — Rig Down Time — Rig Up Time

Rig Up Time — Rig Up Time — Rig Up Time — Rig Up Time — Rig Up Time

Rig Down on Bit # 2 — Bolt + Nut Tightened — Rig Down Time

Drill Pipe	Size	Wgt.	Classification 1	2	3	Total	Stands Drilled	Ft. Drilled Since Sharpen	Total Ft. Drilled	Caliper Date	Results	Hours Since Last Sharp

HEAD OFFICE PAYROLL COPY

№ 1390 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL CANDEX N 43

RIG NO. 11-11 LOCATION DAHADINNI RIVER N.W.T.

DATE JAN 5 1971

DATE Jan 6 71 RIG 11-11

Tour 1 (Midnight – 8 A.M.)

From	Footage	To	Hrs. on Bottom
300	42	342	5 3/4

Bits: 2 9 7/8 TC [illegible] 40 50 75 [illegible]

Weight: 112 113 / 11.2 ... Viscosity: 70 67 / 67

Remarks	Start	Stop	Total
Drilling	12.00	12.30	1/2
Add Rods	12.30	1.30	1
Drilling	1.30	1.45	1/4
Clean sand out of [illegible]	1.45	2.15	1/2
Drilling	2.15	5.45	3 1/2
Add Rods	5.45	6.15	1/2
Drilling	6.15	7.45	1 1/2
Rig Ser.	7.45	8.00	1/4

FIRES

Signature: [illegible]

Tour 2 (8 A.M. – 4 P.M.)

From	Footage	To	Hrs. on Bottom
342	16	366	2 1/4

Bits: 2 9 7/8 TC [illegible] 75 64 72 9 1/2

Additives: 12 Sx Gel

2 SET Pump [illegible] Valves (9 valves)

Remarks	Start	Stop	Total
Drilling	8.00	10.15	2 1/4
Repair Swivel Head	10.15	11.30	1 1/4
Repair pumps, Mix Mud	11.30	4.00	4 1/2
Pump full of sand			
(Go [illegible])			

FIRES

Signature: Phil St. Amand

Tour 3 (4 P.M. – Midnight)

From	Footage	To	Hrs. on Bottom
366	5	361	1 3/4

Bits: 2 9 7/8 TC [illegible] 64 77 11 1/2

Additives: 14 Sx [illegible] / 30 Sx Gel

General: 2 Desilter Cone Lined

Remarks	Start	Stop	Total
Mixing Mud (Go [illegible])	4.00	8.00	4
Drilling	8.00	9.00	1
Mixing Mud & cleaning pump	9.00	11.00	2
Trouble with sand			
Drilling	11.00	11.45	3/4
Rig Ser.	11.45	12.00	1/4

FIRES

Signature: Geo Pickering

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT; IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

Tour 1 Midnight – 8 A.M.		Hrs.
Driller	G. Stanger	8
Derrick	C. Jensen	8
Motor		
Floor	Ivan Yarbic	8
Floor		
Floor		

INJURIES COMPLETE BELOW

Tour 2 8 A.M. – 4 P.M.		Hrs.
Driller	Phil St. Amand	8
Derrick	Claude Gelinas	8
Motor	R. Fang	10
Floor		
	Larry Nielsen	13
	[illegible]	14
	[illegible]	14

Tour 3 4 P.M. – Midnight		Hrs.
Driller	Geo Pickering	8
Derrick	Regean [illegible]	8
Motor	[illegible]	8
Floor		
Floor	Ivan Yarbic	5
Floor	G. Stanger	5

Position		Signature	Hrs.

Toolpusher Approval

SAFETY TALKS

Given By

Subject

Approved by Operator's Representative

Approved by Toolpusher

Classification 24 24

EQUIPMENT CHANGES

HEAD OFFICE PAYROLL COPY

№ 1299 HSW

№ 1299 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-1 LOCATION DAHADINNI RIVER NWT

DATE JAN 4 19 91

DIRECTIONS TO WELL CANDEX N43

TOUR 1 MIDNIGHT TO 8 AM

From	Footage	To
296	~~8~~	~~294~~

No.	Size	Type	Serial No.	R.P.M.
2	9⅞	T.C	590764	60 ~~8~~

Mud	12 am	2 am	4 am	6 am
Weight	11.3		11.3	
Viscosity	55		55	

Remarks	Start	Stop	Hours
Tripping in 60'	12⁰⁰	12⁴⁵	¾
washing hole cleaning (tag)	12⁴⁵	1¹⁵	½
WASHING, REAMING DOWN TO 226	1¹⁵	8⁰⁰	6¾

D. Sherstrom

		No.
Driller	D. Sherstrom	8
Derrick	C. Vaarlan	8
Floor	Ivan Yardi Lewis	

TOUR 2 8 AM TO 4 PM

From	Footage	To	No. on Bottom
286	8	294	1

No.	Size	Type	Serial No.	Drilled
2	8⅞	TC	590764	294 1

Mud	8 am	10 am	12 noon	2 pm
Weight		11.5	11.1	
Viscosity		57	57	

General: no gray sample made since first flushing (?) ... in order

Remarks	Start	Stop	Hours
Add Rods, Reaming	8⁰⁰	8¹⁵	¼
REAMING IN	8¹⁵	9⁰⁰	¾
Add Rods	9⁰⁰	9¹⁵	¼
Reaming in	9¹⁵	12¹⁵	3
Adding Rods	12¹⁵	12⁴⁵	½
Reaming.	12⁴⁵	2³⁰	¾
Adding Rods	1³⁰	1⁴⁵	¼
Reaming.	1⁴⁵	2³⁰	¾
Drilling 286-294	2³⁰	3³⁰	1
Repair water swivel	3³⁰	4⁰⁰	½

Driller's Signature

		No.
Driller	Mike McBrine	8
Derrick	Claude Gelinas	10
Motor	R. Lang	10
	Larry Dibey	9
Floor	Martin Fauteux	12
	Annie Lubel	11

TOUR 3 4 PM TO MIDNIGHT

From	Footage	To	No. on Bottom
294	6	300	½

No.	Size	Type	Serial No.	R.P.M.	Drilled	Hrs.
2	8⅞	TC yard	590764	60	14	1½

Mud	4 pm	6 pm	8 pm	10 pm
Weight	11.5		11.4	11.5
Viscosity	60		58	56

Additives: 34 Sacks Salt, 18 Sacks - Gel...

Surveys: 294 1

Remarks	Start	Stop	Hours
Mixing mud (repair water swivel)	4⁰⁰	6⁰⁰	2
Fixing CABLE ON WIRELINE	6⁰⁰	7⁰⁰	1
Pick up & Add Rods	7⁰⁰	8⁰⁰	1
wireline came off sheave	8⁰⁰	9¹⁵	1¼
Totco Test 294 -	9¹⁵	9⁴⁵	½
Junk in pumps cleaning	9⁴⁵	11¹⁵	1½
Drilling.	11¹⁵	11⁴⁵	½
Rig Ser.	11⁴⁵	12⁰⁰	¼

Glen Pickering

		No.
Driller	Glen Pickering	8
Derrick	Kefran Bolan	8
Motor	Les Richard	5

24 hrs

Approved by Operator's Representative: [illegible]

Approved by Toolpusher: C. Anderson

HEAD OFFICE PAYROLL COPY

№ 1298 HSW

№ 1298 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO 11-11 LOCATION DANADINNE RIVER N.W.T. DATE JAN 3 1991

DIRECTIONS TO WELL: CANDEX NH3

MAILING POINT: SHIPPING POINT: HILER HOVER: ROAD CONDITIONS:

Hole No.	Size	Type	Total Depth	Serial No.	Wgt.	R.P.M.	Bit Hours	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	R.P.M.	Pump Output	T.	B.	G.
225	46	276	2½			4	3										
1	8¾	TC		102304		60	276	16½									

Time	Remarks	Start	Stop	Hours
	Pick up hard rock	12:00	1:00	1
	Straighten wire line cable	1:00	2:00	1
	Totco test (no miles)	2:00	3:00	1
	Drilling	3:00	4:00	1
	Wash & clean hole	4:00	4:30	30
	Pick up hard rock	4:30	5:30	1
	Drilling	5:30	7:00	1½
	Wash & clean hole	7:00	7:30	30
	Working on pump not finished	7:30	7:45	15
Fines	Allen Sanderson	7:45	8:00	15

Hole No.	Size	Type	Total Depth	Serial No.	Wgt.	R.P.M.	Bit Hours	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	R.P.M.	Pump Output	T.	B.	G.
276	10	286	½			60											
1	8¾	TC		102304													

Time	Remarks	Start	Stop	Hours
	Add rods	8:00	8:45	¾
	Drilling	8:45	9:15	½
	Repair pump - Clean hole	9:15	10:00	¾
	Circulate hole - Mixing mud	10:00		
			4:00	6
	2 - Tractors hauling water, salt & mud sacks (over time mixing mud)			
Fines	Robert's Grocery			

Hole No.	Size	Type	Total Depth	Serial No.	Wgt.	R.P.M.	Bit Hours	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	R.P.M.	Pump Output	T.	B.	G.
286						4											2½
2	8¾	RC		580304			286										

Time	Remarks	Start	Stop	Hours
	Reaming back out off hole - Mixing mud	4:00	8:00	4
	Trip out (to mix mud)	8:00		
	Change bit - Hole scraping		11:00	3
	Rig S.R.	11:00	12:00	½
	2 Tractors hauling water & mud & has. (over time mixing mud)			
	6. Struckers	4:00.		
Fines	Hector Sanderson			

Time	Remarks	Start	Stop	Hours
	30 sacks gel			
	19 sacks barite			
	1 sack lime			

B.O.P. Tested: Pipe Rams: Blind Rams: Kelly Cock: Safety Valve: Drill Pipe Size: Drill Collars: Fuel on Hand: TOTAL: Fuel Used: Bits Used: 2 Bit Operation: 24 hrs.

Equipment Changes: Days from Spud: 3

Total Company Time: Total Contractor's Time:

Approved by Operator's Representative: Approved by Toolpusher:

Drill Pipe	Size	Joints	Classification 1	2	4	Tests	Date Tested	Hr. Drilled since Tested	Total Hr. Drilled	Caliper Date	Results	Pipe Back

HEAD OFFICE PAYROLL COPY

№ 1297 HSW

[redacted]

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

Tour 1 Midnight 8 A.M.	Hrs.
Driller: S. Stanyon	8
Derrick: C. Pedson	8
Motor:	
Floor: Susan Gordon	8
Floor:	
Floor: Hector Sanderson	13
Hours Carried Below	

Tour 2 8 A.M. 4 P.M.	Hrs.
Driller: Lloyd Gerard	8
Derrick: Claude Gibson	8
Motor: R. Kenz	8
Floor: Larry Gibson	8
Floor: Merlin Lantzopp	8
Floor: Larry Richard	8
Floor: Clyde Lobel	8
Hours Carried Below	

Tour 3 4 P.M. Midnight	Hrs.
Driller: Clyde Lobel	6
Derrick: Richard Bread	14
Motor: Merlin Lantzopp	6
Floor: Larry Gibson	4
Floor: R. Kenz	4
Floor: Hector Sanderson	46
Hours Carried Below	

[redacted]

Position	Tour	Signature	Hrs.

Toolpusher's Approval:

SAFETY TALKS

Given By:

Subject:

№ 1297 HSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: CANDEX N H3

RIG NO. 141 LOCATION: DAHADINNE RIVER N.W.T. SEC. TWP. RGE. W. DATE: JAN 2 1971

MAILING POINT: SHIPPING POINT: MILES MOVED: ROAD CONDITIONS:

Time	Remarks	Start	Stop	Hrs.
	Drilling	12.00	1.00	1
	Pick up + Add 4½" Collars	1.00	2.15	1½
	Drilling	2.15	3.30	1½
	Pick up Add Collars	3.30	4.30	1
	Drilling	4.30	5.30	1
	Pick up Collars	5.30	6.15	¾
	Drilling	6.15	7.15	1
	Pick up Collars	7.15	7.45	½
	Rig Serv.	7.45	8.00	¼
	Add 3 Rods	8.00	8.30	0.50
	Total Test at 100 F.T.	8.30	8.55	0.25
	Drilling	8.55	10.45	1.50
	Add 3 Rods	10.45	11.05	0.20
	Drilling	11.05	11.35	0.5
	Change Channing	11.10	12.00	0.50
	Drilling	12.00	1.00	1.0
	Add 2 Rods	1.00	2.00	1.0
	Total Test at 126 F.T.	2.00	2.35	0.35
	Drilling	2.35	3.45	1.10
	Ream Hole	3.45	4.00	0.15
	Drilling	4.00	5.00	1.00
	Add Rods	5.00	5.45	0.45
	Reaming to Bottom	5.45	6.00	0.15
	Mix Mud	6.00	6.30	0.30
	Drilling	6.30	8.00	1.30
	Mix Mud	8.00	8.30	0.30
	Drilling	8.30	9.45	1.15
	Change Hole for Cave	9.45	10.15	0.30
	2 Hrs. Making Dr	10.15	11.00	0.45
	Racks 1 Hrs. Messaging Pipe	11.00	12.00	0.45
		12.00	12.00	1.0

Drilling — Add Rods

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY HAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY

[redacted]

Tour	Position	Name	Hrs.
1 (Midnight – 8 A.M.)	Driller	L. Sh[illegible]	8
	Derrickman	Ivan Garbie	8
	Floor	Claude Tomas	8
2 (8 A.M. – 4 P.M.)	Driller	Fred D. Cornet	8
	Derrickman	Claude Mahon	8
	Floor	R. Franz	8
	Floor	Martin Lagrange	8
	Floor	Larry Nielsen	8
	Other	Pierre Lebel	8
3 (4 P.M. – Midnight)	Driller	Reg Pickering	11
	Derrickman	Nelson Bean	11
	Floor	L. A. Pickard	11
	Floor	Martin Lagrange	5
	Floor	Pierre Lebel	5
	Floor	Larry Nielsen	5

[redacted]

Position	Name	Signature	Hrs.

Toolpusher's Approval:

SAFETY TALKS

Given By:

Subject:

Nº 1296 HSW

PAYROLL

Bit No. 1 — Type 9 7/8 FC — Serial No. K2804 — Jets 14 14 5

Weight 10/1 — Viscosity 40 — Gel 76

Drill Collars 2 — Bit No. 2 — Type 9 7/8 FC — Serial No. 153094 — Jets 14 14 14

Weight 11.5 — Viscosity 42 — Gel 72

Drill Collars 2 — Bit No. 3 — Type 9 7/8 FC — Serial No. 160172 — Jets 14 14 14

Weight 12 — Viscosity 57 — Gel 52

Drill Collars 2 — Bit No. 4 — Type 9 7/8 FC — Serial No. 160172 — Jets 14 14 14

Weight 12 — Viscosity 57 — Gel 52

Drill Pipe 3½ — Drill Collars 4½

Equipment Changes:

Date from Spud: 2

Total Contractor Time: Total Connections Time:

Approved by Operator's Representative: [illegible]

Approved by Toolpusher: [illegible]

Nº 1296 HSW

HEAD OFFICE PAYROLL COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO 11 LOCATION DASHDINI-LAKE

DIRECTIONS TO WELL CANDEX N43

DATE JAN 1

REMARKS

24 - START

Mix Mud 12 3 3

Rig up to Drill 3 4 5

(Force impeller pull out Dec 31 - 1970)

(Mech) Called out to start boilers

Called out to Repair Generator

WORK ON FLOW LINE

HOLD BACK CABLES ON POWER TONGS,

PUT UP KELLY HOSE

MAKE UP KELLY ROD

PUT UP TOTCO CABLE

CHANGE CHOKE JAWS 4 8

Mech) Change Worn Rod Shackle & Bend Rod

Replace Worn Hose on Mud Mix by Blackwell's Welding

Mech) Change O-Rings Impeller

Make Pin for Dog Collar

Weld Sub for Sucking barrel

SALT 30 BAGS 14.00 9.00 3.4

ZEOGELB BAGS 25 LBS

DRIVING

Picking up & rig 6" Drill Collars 10.30 11.45 1.4

Rig Idle 11.45 12.00 .4

TOUR 1 MIDNIGHT - 8 A.M.

Driller G. Stanger 8

Derrick C. Barron

Floor Swan Yarder 8

Floor Larry Nielsen 2

TOUR 2 8 A.M. - 4 P.M.

Driller Hyd. D. Arnold 8

Derrick Claude Nielsen 8

Floor R. Franz 8

Floor Larry Nielsen 8

Floor Clark Lobel 12

TOUR 3 4 P.M. - MIDNIGHT

Driller Max Pickering 8

Derrick R. Bacon 8

Floor L.A. Pickard 8

Floor Larry Nielsen 5

Floor Martin Tautenjo 6

Position | Signature | Hrs.

Tailpushers Approval

SAFETY TALKS

Given By:

Subject:

Approved by Operator's Representative

Approved by Tailpusher

№ 1295 HSW

PAYROLL

HEAD OFFICE PAYROLL COPY

№ 1295 HSW

[redacted]

Cendes et al Dahadenne M-43A

N-7940-1-487

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL TO

WELL

RIG NO. 11-11 LOCATION

LSD SEC TWP RGE W DATE 5-5-6 19

HAULING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME: START | STOP | INTVL

FIRES

DRILLER'S SIGNATURE

Mud Tests for Mud Tests

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

TOTED RING ON BIT #

CLASSIFICATION

DRILL PIPE

TOTAL

CALIPER DATE

RESULTS

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2159 NEW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION Carlsberg Ms-A LSD SEC TWP RGE W DATE Sept 5 1971

DIRECTIONS TO WELL [illegible] MAILING POINT Wat May Way SHIPPING POINT N W T MILES MOVED ROAD CONDITIONS

REMARKS

TIME

DRILL COLLARS

WEIGHT

VISCOSITY

GEL

W.L. F.C. pH

DEVIATION: Hours Ob. D. Flow O. Flow

Weather Temp.

Drilling Line Record

FIRES

DRILLER'S SIGNATURE

Wm. C. Williams

Pipe Tally Record

Equipment Changes

Driller's Signature

S.O.P.

Fuel on Hand 12:01 a.m.

Fuel Rec. & Today (add)

TOTAL

Fuel on Hand 11:59 p.m.

FUEL USED

Fuel Rec'd Chk #

Fuel Rec'd Chk #

Fuel Rec'd Chk #

Fuel Rec'd Chk #

NOTES KIND ON RIG #

Motor Generator No.

DRILL PIPE

CLASSIFICATION

TOTAL

CALIPER DATE

RESULTS

Date from Mud

Total Contractor Time

Total Contractor's Time

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2188

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

RIG No. 1-11 LOCATION CALLER MAY-4 LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE ___ 19__

DAILY DRILLING LOG

DIRECTIONS WELL [illegible] MAILING POINT [illegible] DELIVERING POINT [illegible] MILES MOVED ___ ROAD CONDITIONS ___

REMARKS | TIME: START | STOP | TOTAL

FIRES ___ DRILLER'S SIGNATURE [illegible]

FIRES ___ DRILLER'S SIGNATURE ___

FIRES ___ DRILLER'S SIGNATURE [illegible]

B.O.P. | Tested | Pressure Test | Pipe Ram | Blind Ram | Rotating & Bell Nipple Inspection Date

Mud | Pipe Rams | Blind Rams

Rotary Bushing On B.T.D. ___ Rotary Bushing ___ Rev.

Daily Cost Chk #: ___ Rig Service Chk #: ___ Auto Cost Chk #: ___ Fuel Service Chk #: ___

Fuel on Hand (7:01 a.m.) ___ Fuel Rec. in Today (sold) ___ TOTAL ___ Fuel on Hand (11:59 p.m. Yesterday) ___ FUEL USED ___

FUEL ___ CEMENT RETURNS ___ DATE FROM SPUD ___ EQUIPMENT CHANGES ___ TRANSFER # ___

TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

Approved by Operator's Representative ___

Approved by Toolpusher [illegible]

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	No. Drilled Since Delivery	Total No. Drilled	CALIPER DATE	RESULTS	TOTAL FT. DRILLED

CONSERVATION BOARD COPY

№ 2187

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CALLAS 1842-A LSD. SEC. TWP. RGE. W. DATE 5 Oct 61 19 61

DIRECTIONS TO WELL [illegible] MAILING POINT Normanville SHIPPING POINT Ro W T MILES MOVED ROAD CONDITIONS

Time	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. lbs.	Sub. Wt.	C.F.M.	Air Wt. Sub. Wt.

Bit No.	Size	Type	Jets/Nozzles	Serial No.	Wgt.	R.P.M.	Bottom or Total	No.	Removed	No.	Pump Cir.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.	
WEIGHT					No. 1					No. 2					
VISCOSITY					MODEL					MODEL					
OIL															

W.L. F.C. pH DESILTER Hours On: G. Flow: O. Flow: SURVEYS At Feet Degrees

GENERAL

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	At Miles	Date Slip or Cut	Wear Slip	At Miles (in Service)

REMARKS

TIME	START	STOP	HRS.

FIRES DRILLER'S SIGNATURE

Time	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. lbs.	Sub. Wt.	C.F.M.	Air Wt. Sub. Wt.

Bit No.	Size	Type	Jets/Nozzles	Serial No.	Wgt.	R.P.M.	Bottom or Total	No.	Removed	No.	Pump Cir.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		p.m.	10 p.m.	12 noon	2 a.m.	
WEIGHT					No. 1					No. 2					
VISCOSITY					MODEL					MODEL					
OIL															

W.L. F.C. pH DESILTER Hours On: G. Flow: O. Flow: SURVEYS At Feet Degrees

GENERAL

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	At Miles	Date Slip or Cut	Wear Slip	At Miles (in Service)

FIRES DRILLER'S SIGNATURE

Time	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. lbs.	Sub. Wt.	C.F.M.	Air Wt. Sub. Wt.

Bit No.	Size	Type	Jets/Nozzles	Serial No.	Wgt.	R.P.M.	Bottom or Total	No.	Removed	No.	Pump Cir.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 a.m.	
WEIGHT					No. 1					No. 2					
VISCOSITY					MODEL					MODEL					
OIL															

W.L. F.C. pH DESILTER Hours On: G. Flow: O. Flow: SURVEYS At Feet Degrees

GENERAL

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	At Miles	Date Slip or Cut	Wear Slip	At Miles (in Service)

FIRES DRILLER'S SIGNATURE

B.O.P.	Tested	Planned Time	Run Out	Pulling & Reel Inspected Date
Model				
Pipe Rams				
Blind Rams				

NOTICE BING ON BIT @ Bar. Operated Hrs.

Cement in mud's Chk. #
Rig Service Chk. #
Kelly Cock Chk. #
Kelly Bushing Chk. #

Fuel on Hand 12:01 a.m. gals.
Fuel Rec. d Today gals.
TOTAL gals.
Fuel on Hand gals.
FUEL USED gals.

GAS MS CNG
NO. HR. USED DAY CEM.
FLUE CEMENT RETURNS

EQUIPMENT CHANGES TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Sent	Rt. Richard (Hole Sent)	Lost Rt. Richard	CALIPER DATE	RESULTS	FROM FIRE DATE

CONSERVATION BOARD COPY

№ 2187 NSW

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

WELL NO. 1-1 LOCATION Cooper Wash-4 LSD SEC TWP RGE W DATE Sept 3- 1971

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT [illegible] MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

Wing & [illegible]

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Opened Clsg. Rams Lock Testing & Test Inspection Date

Rig Service Clck #

Swing Clck Clck #

Kelly Bushg Clck #

Fuel on Hand (2.01 a.m.) GALS.

Fuel Rec. & Tanks (GAL)

TOTAL

Fuel on Hand (11.59 p.m. Tomorrow) GALS.

FUEL USED

TOTAL HRS ON BIT #

Bit Operated Hrs.

CLASSIFICATION 2 3 4 TOTAL

DRILL PIPE Size Wgt. Date Serial Number Ft. Drilled Since Setting Type Fr. Drilled CALIPER DATE RESULTS FROM FIRST BIT

EQUIPMENT CHANGES TRANSFER #

DATE FROM SPUD

TOTAL CONTRACT TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2186

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

RIG NO. 17-A LOCATION CANDLE MILLS LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL

MAILING POINT NORMAN WELLS SHIPPING POINT AWT

MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TO-WATER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tallyman

DRILL PIPE	Size	Wt/ft	CLASSIFICATION 2	1	0	TOTAL	Date Received	At Drilled (Joints Remaining)	Total At Drilled	CALIPER DATE	RESULTS	FROM PIPE SUP

CONSERVATION BOARD COPY

№ 2185 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CANDEX MHS-A DATE Sept 1 1971

DIRECTION WELL [illegible] 65° 32' 34.5 Long 126° 37' 15.1" MAILING POINT NORMAN WELLS SHIPPING POINT N.W.T.

REMARKS | TIME START | STOP | INTVL

FIRES

DRILLER'S SIGNATURE

REMARKS	START	STOP	INTVL
Clean up site [illegible]	7	11	4
[illegible]			

FIRES

DRILLER'S SIGNATURE

REMARKS	START	STOP	INTVL
Clean up & [illegible]	[illegible]	[illegible]	8
Make [illegible] 205			
205 [illegible]			
7 [illegible] A.M.			

[illegible] 20 [illegible]

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DSW DDL-1

CONSERVATION BOARD COPY

Nº 2181 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CANDELARIA 3-A LSD SEC TWP RGE W DATE August 31 19 71

DIRECTIONS TO WELL La 2 1/2 S.E. Lake 12 1/4 N 1 1/2 W Wormad Wells SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS | TIME START | STOP | TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

Clean up

FIRES

B.O.P. | Tested | Opened Time | Pressure | Packing & Seal Inspected Date

Model

Pipe Rams

Blind Rams

Choke & Kelly Cock

Rig Repairs

Kelly Cock

Fire Guard

Fuel on Hand 12:01 a.m.

Fuel Rec. & Tanks Used

TOTAL

Fuel on Hand 11:59 p.m.

FUEL USED

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

DATE TRUCK STUD

CEMENT RETURNS

Approved by Operator's Representative

Approved by Inspector

DRILL PIPE | Size | Grade | CLASSIFICATION 2 | 3 | 4 | TOTAL | Date Added | Ft. Drilled | Total Ft. Drilled | CALIPER DATE | RESULTS

CONSERVATION BOARD COPY

№ 2153

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: [illegible]

RIG NO. 11-H LOCATION: Canoe Bay 2-4 LOT ___ SEC ___ TWP ___ RGE ___ W ___ DATE August 30 1964

MAILING POINT: Norman Wells SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

REMARKS

TIME: START ___ STOP ___ TOTAL ___

FIRES ___ DRILLER'S SIGNATURE

Rig Down
Spudding Cost
Move Equipment
& Wait on Barge

FIRES ___ DRILLER'S SIGNATURE

Tearing Roads

FIRES ___ DRILLER'S SIGNATURE

B.O.P. ___ EQUIPMENT CHANGES ___ TRANSFER # ___

TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

DATE FROM SPUD ___

Approved by Operator's Representative ___

Approved by Taxpayer ___

CONSERVATION BOARD COPY

№ 2182

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11 LOCATION CANOLE MAR 2-4 LAT. ___ SEC. ___ TWP. ___ RGE. ___ W. ___ DATE August 30 19 71

DIRECTIONS TO WELL LA [illegible] MILES FROM 124 [illegible] MAILING POINT Normandy [illegible] SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

Time	Footage	Fr.	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Wt.

	No.	Size	Type	Manufacturer	Serial No.	Liner	S.P.M.	Pump Pressure	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
DRILL PIPE																		

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.	
WEIGHT					No. 1 Size					No. 2 Size					
VISCOSITY					Model					Model					
GEL					Liner					Liner					
W.L.	F.C.	pH			DESILTER Hours Op.		U. Flow		O. Flow						

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rope Slip & Cut	Hours	Date

REMARKS

TIME: START ___ DROP ___ DEPTH ___

FIRES ___ DRILLER'S SIGNATURE ___

	Footage	Fr.	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Wt.

	No.	Size	Type	Manufacturer	Serial No.	Liner	S.P.M.	Pump Pressure	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
DRILL PIPE																		

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT					No. 1 Size					No. 2 Size					
VISCOSITY					Model					Model					
GEL					Liner					Liner					
W.L.	F.C.	pH			DESILTER Hours Op.		U. Flow		O. Flow						

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rope Slip & Cut	Hours	Date

FIRES ___ DRILLER'S SIGNATURE ___

	Footage	Fr.	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Wt.

	No.	Size	Type	Manufacturer	Serial No.	Liner	S.P.M.	Pump Pressure	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
DRILL PIPE																		

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT					No. 1 Size					No. 2 Size					
VISCOSITY					Model					Model					
GEL					Liner					Liner					
W.L.	F.C.	pH			DESILTER Hours Op.		U. Flow		O. Flow						

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rope Slip & Cut	Hours	Date

FIRES ___ DRILLER'S SIGNATURE ___

B.O.P.	Tested	Pressure Test	Pipe ram	Blind ram	Packing & Seal Inspection Date
Make					
Type Ram					
Size Ram					

TOTCO RING ON BIT #

Boiler Operator ___ No.

Casing in Hole Size #	
Rig Service Size #	
Daily Cost Size #	
Fire Force Size #	

Fuel on Hand 12:01 a.m.	gals.	
Fuel Rec. (Tanks Level)	gals.	
TOTAL	gals.	
Fuel on Hand 11:59 p.m. (Measured)	gals.	
FUEL USED	gals.	

BAR	79	1300
RR. USED	561	1304
FUEL		A.M. P.M.
CEMENT RETURNS (YES, NO)		

EQUIPMENT CHANGES ___ TRANSFER #

DATE FROM SPUD ___

TOTAL Contract Cost ___ NO. ___ TOTAL CONTRACTOR'S Cost ___ NO. ___

Approved by Operator's Representative ___

Approved by Toolpusher ___

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Ft. Drilled Since Delivered	Times Re-Delivered	CALIPER DATE	RESULTS	FROM FIRE FACT

CONSERVATION BOARD COPY

№ 2182

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CANDER M4 3-4 LAT. SEC. TWP. RGE. W. DATE August 27-11 19 70

DIRECTIONS TO WELL Lat. 6 2 37 Long 130 21 W MAILING POINT Norman Wells SHIPPING POINT MILES MOVED ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.

Hole	Bit	Type	Manufacturer	Serial No.	Depth	R.P.M.	Bottom Hole Assembly	Hrs.	Removed	Hrs.	Bit Condition	Pump Pressure	S.P.M.	Total Footage	T.	B.	G.

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					MODEL					MODEL					2
GEL															3
W.L.	F.C.	pH			DRILLER: Hours On			O. Flow		O. Flow					4
															5
															6
															7

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Slip Wear Cut	Wear Slip	Air Miles

REMARKS

TIME	START	STOP	HRS.

FIRES

DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.

Hole	Bit	Type	Manufacturer	Serial No.	Depth	R.P.M.	Bottom Hole Assembly	Hrs.	Removed	Hrs.	Bit Condition	Pump Pressure	S.P.M.	Total Footage	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					MODEL					MODEL					2
GEL															3
W.L.	F.C.	pH			DRILLER: Hours On			O. Flow		O. Flow					4
															5
															6
															7

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Slip Wear Cut	Wear Slip	Air Miles

REMARKS

Rigging down
Lay down derrick
Cellar
Load & unload [illegible]
Complete dig cellar
Prepare to move [illegible]
at Rig

FIRES

DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.

Hole	Bit	Type	Manufacturer	Serial No.	Depth	R.P.M.	Bottom Hole Assembly	Hrs.	Removed	Hrs.	Bit Condition	Pump Pressure	S.P.M.	Total Footage	T.	B.	G.

	8 a.m.	10 a.m.	12 noon		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT				No. 1					No. 2					1
VISCOSITY				MODEL					MODEL					2
GEL														3
W.L.	F.C.	pH		DRILLER: Hours On			O. Flow		O. Flow					4
														5
														6
														7

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Slip Wear Cut	Wear Slip	Air Miles

REMARKS

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Expected Time	Pressure	Working & Test Operating Data
Model				
Pipe Rams				
Blind Rams				

Rotary Bushing Size

Rotary Bushing Elevation Hrs.

Check in each Chk #

Rig Serial Chk #

Rotary Cond Chk #

Pump Serial Chk #

Fuel on Hand 12:01 a.m. gals

Fuel Rec. & Today Load gals

TOTAL gals

Fuel on Hand 11:59 p.m. gals

FUEL USED gals

Kelly

Cement Returns

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	No. Delivered (Joints Delivered)	Total No. Delivered	CALIPER DATE	RESULTS	FROM PIPE RACK

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2181

..POOR. COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: [illegible] MAILING POINT: Norman Wells SHIPPING POINT: N.W.T.

RIG NO. [illegible] LOCATION: Canex M42-A LSD SEC TWP RGE W DATE: August 22 1961

MILES MOVED: ROAD CONDITIONS:

Time	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Air	Tool Wt.	T.F.N.

	No.	Size	Type	Serial No.	Model	Hyp.	S.P.M.	Stroke or Cycle	Min.	Nominal	Min.	Power No.	Pump Pressure	S.P.M.	Tube Velocity	1	2	Q.
1																		
2																		
3																		
4																		

	12 m.	1 a.m.	2 a.m.	3 a.m.		12 m.	1 p.m.	2 p.m.	3 p.m.		12 m.	1 p.m.	2 p.m.	3 p.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					Model					Model					2
GEL															3

W.L. F.C. pH DESILTER Hours Op. Q. Flow Q. Flow SURVEYS Ft. Deg. 4 5

Drilling Line Record: Size Make Serial No. No. Lines Total Wt. Total Wrap Cut Ft. Wrap Cut Ft. Wear Wear Cut Wear Cut

Time	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Air	Tool Wt.	T.F.N.

	No.	Size	Type	Serial No.	Model	Hyp.	S.P.M.	Stroke or Cycle	Min.	Nominal	Min.	Power No.	Pump Pressure	S.P.M.	Tube Velocity	1	2	Q.
1																		
2																		
3																		
4																		

	8 a.m.	10 a.m.	12 noon	2 p.m.		6 p.m.	8 p.m.	10 p.m.	12 m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					Model					Model					2
GEL															3

W.L. F.C. pH DESILTER Hours Op. Q. Flow Q. Flow SURVEYS Ft. Deg. 4 5

Drilling Line Record: Size Make Serial No. No. Lines Total Wt. Total Wrap Cut Ft. Wrap Cut Ft. Wear Wear Cut Wear Cut

Time	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Air	Tool Wt.	T.F.N.

	No.	Size	Type	Serial No.	Model	Hyp.	S.P.M.	Stroke or Cycle	Min.	Nominal	Min.	Power No.	Pump Pressure	S.P.M.	Tube Velocity	1	2	Q.
1																		
2																		
3																		
4																		

	8 a.m.	10 a.m.	12 noon	2 p.m.		6 p.m.	8 p.m.	10 p.m.	12 m.		8 a.m.	10 a.m.	12 noon	2 p.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					Model					Model					2
GEL															3

W.L. F.C. pH DESILTER Hours Op. Q. Flow Q. Flow SURVEYS Ft. Deg. 4 5

Drilling Line Record: Size Make Serial No. No. Lines Total Wt. Total Wrap Cut Ft. Wrap Cut Ft. Wear Wear Cut Wear Cut

REMARKS	TIME START	TIME STOP	TIME INTV.
Rental Gelco Charge & [illegible]	2:00	4:00	2
[illegible]			
[illegible]			
[illegible]			
[illegible]			
FIRES			
DRILLER'S SIGNATURE			
Repair Down	4:00	8:00	4
FIRES			
DRILLER'S SIGNATURE			

B.O.P.	Tested	Repaired Time	Kind	Pressure & Test Holding Time
Model				
Size Rams				
Blind Rams				

POTED RING ON BOX Size Number Mfr.

Closed in weight Ck. #: Fuel on Hand (U.S. g.a.l.): Gal. Rig Service Ck. #: Fuel Rec. & Today Used: Gal. Rig Repair Ck. #: Fuel on Hand (Imp. g.a.l.): Gal. FUEL USED: Gal. TOTAL: Gal. Gal. Gal.

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 1141 LOCATION CANADA MESA

LSD SEC TWP RGE M DATE August 22 1971

MAILING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Inspector

DRILL PIPE	SIZE	GRADE	CLASSIFICATION 2	3	4	TOTAL	Date Added	Ft. Drilled since Added	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE BACK

CONSERVATION BOARD COPY

№ 2179

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 4 LOCATION Carrizo Mesa-H DATE August 26

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 2175

POOR COPY

HEATH & SUNDWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

LOCATION CANDEX MU 1-A

DATE August 25

REMARKS

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 2177

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

LOCATION: CAMILLE MAL-A

DATE: August 1964

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

B.O.P.

EQUIPMENT CHANGES

TOTAL

FUEL USED

CLASSIFICATION

CAL-PER DATE

RESULTS

FROM FIRE BACK

Approved by Operator's Representative

Approved by Contractor

CONSERVATION BOARD COPY

№ 2176

POOR COPY

HEATH & SUNDWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-41 LOCATION Candex Mt-A LSD SEC TWP RGE W DATE August 2 1974

WELL

MAILING POINT Hampers Wells SHIPPING POINT

MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START / STOP / HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

B.O.P. Tested

Approved by Operator's Representative

Approved by Tool Pusher

CLASSIFICATION

CALIPER DATE RESULTS FROM PIPE RACK

CONSERVATION BOARD COPY

№ 2175

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 2171

POOR COPY

DRILLING & SERVICING COMPANY (CANADA)

DAILY WORK REPORT

NO. 44 LOCATION CANDAY M43-A DATE Aug 21

REMARKS

Stand by - Schlumberger 11:00 8:00 P

Take down steam heater
Remove fitting
Sch Can called & TD to HQ
Traverse Tree
Make up Tools
Take down & move back

Stand by Schlumberger 8:00 9:00 6
Prepare for Perf. Tools 9:00 9:08
Sch Can called TD to HQ

Operations back from
Well is cased up to

Perf. gun nipple 34"
Drill pipe

Prepare & complete
Stand by Schlumberger
Perf. tree & gun nipple
Stand by Perf. & Schlumberger

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR 1 MIDNIGHT 8 A.M.

TOUR 2 8 A.M. 4 P.M.

TOUR 3 4 P.M. MIDNIGHT

Nº 2173

HEAD OFFICE PAYROLL COPY

PAYROLL

POOR COPY

JOHN D. SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

LOCATION: CANDY M43-A

REMARKS

Stand by - Schlumberger

Take down steam heater

Remove fitting

Set and cable cat to hole

Traverse tree

Hang overhead

Take down to move hole

Finish

Start by drilling began

Trip in - Clean hole

Set and scale - TD to sheet

Operations tag down

Drill pipe

Trip in - Complete

Start by drilling down

Drill down the pipe stop

Stop pipe to location

HEAD OFFICE PAYROLL COPY

№ 2173

PAYROLL

POOR COPY

DAILY DRILLING LOG

LOCATION GANDEY [illegible]

DATE August 20 — 1971

REMARKS	START	STOP	HOURS
[illegible]	12 00	2 00	2
Trip out	2 00	4 30	2½
[illegible]	4 30	6 15	1¾
Trip out	6 15	8 00	1¾
Trip out	9 00	11 00	2
[illegible]	10 00	4 00	6
Start Remove [illegible] Back [illegible] Cleaning [illegible]			
[illegible] over [illegible] Down [illegible] out 2½" [illegible] To [illegible]			
[illegible] for [illegible]	4 00	12 00	8
[illegible] Clean up [illegible] out [illegible]			
[illegible] Cleaning up [illegible]			

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR ① MIDNIGHT - 8 A.M.

Driller [illegible]

Derrick Kohl [illegible]

Floor Abe Kol

INJURIES - COMPLETE BELOW

TOUR ② 8 A.M. - 4 P.M.

Floor Conrad [illegible]

INJURIES - COMPLETE BELOW

TOUR ③ 4 P.M. - MIDNIGHT

Floor R. Baulne

HEAD OFFICE PAYROLL COPY

Nº 2172

Nº 2172

PAYROLL

POOR COPY

DAILY REPAIRING LOG

REMARKS

TIME

HEAD OFFICE PAYROLL COPY

№ 2171

PAYROLL

D

POOR COPY

DAILY DRILLING LOG

REMARKS

TIME

HEAD OFFICE PAYROLL COPY

№ 2170

PAYROLL

POOR COPY

HEAD OFFICE PAYROLL COPY

№ 2169 NSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-1 LOCATION CANDELETAL MA3-A DATE August 16 1971

REMARKS

TIME

Start	Stop	Hrs.
12:00	2:00	2
2:00	2:30	½
2:30	6:00	3½
6:00	7:00	1
7:00	8:00	1
8:00	10:00	2
10:00	4:00	6
4:00	7:30	3½
7:30	9:45	2¼
9:45	9:30	½
9:30	11:15	1¾
11:15	12:00	¾

FIRES

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR 1 MIDNIGHT - 8 A.M.

TOUR 2 8 A.M. - 4 P.M.

TOUR 3 4 P.M. - MIDNIGHT

INJURIES - COMPLETE BELOW

Position | Signature

Tailpusher Approval

SAFETY TALKS

Given By

Subject

Approved by Operator's Representative

Approved by Tailpusher

№ 2168 NSW

PAYROLL

HEAD OFFICE PAYROLL COPY

POOR COPY

SMITH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DATE: August 15

REMARKS

	Start	Stop	Hrs.
Trip in	12.00	3.00	3
Pick Riser Pipe & Blank Hose	3.00	3.30	½
Hook up Test Header	3.30	4.00	½
Taking Drill Stem Test	4.00	8.00	4
Drill Stem Test No 3	8.00	8.45	¾
Trip out string wet	8.45	10.15	1½
Hang mud line	10.15	11.15	1
Trip out	11.15	3.45	4½
Rig SER	3.45	4.30	¾
Losses of Mud			
Trip out to run Test Tools (losing mud)	4.00	7.00	3
Pick up core barrel	7.00	8.00	1
Check out core barrel	8.00	10.30	2½
Check surface valves			
Trip in open core barrel (still losing circulation)	10.30	12.00	1½
Pick up 4½" Stabilizer for Drill Mud Trains to lose			

Fishing Operations

Footage Change

Total Footage 144'

Approved by Operator's Representative

Approved by Supervisor

Employee is required to sign personally at the completion of each shift; if injury was received sign at bottom of sheet only.

Tour 1 Midnight - 8 A.M.

Driller: Dwight Hale

Derrick: Red Cole

Tour 2 8 A.M. - 4 P.M.

Tour 3 4 P.M. - Midnight

Injuries - Complete Below

Safety Talks

Given By:

Subject:

№ 2167 MSW

D

PAYROLL

HEAD OFFICE PAYROLL COPY

POOR COPY

DAILY DRILLING LOG

DATE August 14

REMARKS	TIME START	TIME STOP	TOTAL
Shakedown Testing Testing	12.00	8.00	8
Stand By wait on tools for Shakedown	9.00	4.00	8
Over time Building Radar Room set up Beco + Rig accumulator overtime			
Stand By Set up Accumulator for testing. Check out Training for Davis Strain Test Pick up Davis Strain Tools Training ing Rig S.R.	9.00	8.00	2
	8.00	9.30	1½
	9.30	11.45	2¼
	11.45	12.00	¼

TOUR 1 MIDNIGHT - 8 A.M.

Driller D. H. Dixon
Derrick Ron Folz
Motor
Floor Abe Koe
Floor
Floor

INJURIES - COMPLETE BELOW

TOUR 2 8 A.M. - 4 P.M.

Driller L. Langgan
Derrick Leo Chamberlain
Motor
Floor
Floor
Floor
Other

INJURIES - COMPLETE BELOW

TOUR 3 4 P.M. - MIDNIGHT

Driller
Derrick
Motor R. W. Rawlock
Floor L. Langgan
Floor
Floor

INJURIES - COMPLETE BELOW

Position | Signature

Toolpushers Approval

SAFETY TALKS

Given By:

Subject:

Approved by Operator's Representative

Approved by Toolpusher

№ 2166 NSW

HEAD OFFICE PAYROLL COPY

№ 2166 NSW

D

PAYROLL

POOR COPY

DEATS & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

LOCATION: Canada Hill

DATE: August

REMARKS	TIME START	TIME STOP	TOTAL
Trip in to accurate hole	12.00	2.00	2
Operate hole	4.00	8.00	4
Tripping out	4.00	6.00	2
Trip out (Cloudy)	8.00	1.30	5½
Out of Stringers — Building Board Room	1.30	4.00	2½
Overtime loading + unloading Chopper + gaining access Building Board Room			
Run Takeoff and Stringers for Testing Hole	4.00	6.00	2
Test Hole	6.00	12.00	6
YES = TO 90 CLL SHEE			
GAN = TO 70 CLL SHEE			
AMPLIT RUN SCALE = TOOL FAILURE			
Overtime on Board Room + Chopper			

Employee is required to sign personally at the completion of each shift if inquiry was received sign at bottom of sheet only.

TOUR 1 MIDNIGHT – 8 A.M.: Driller L. Knight Fisher; Derrick: Ron Folz; Motor: Alec Kae; Floor: [illegible]

TOUR 2 8 A.M. – 4 P.M.: Driller L. Tangney; Derrick: Lee Chamberlain; Motor: James Cott; Floor: Leon Guy Hoy

TOUR 3 4 P.M. – MIDNIGHT: Driller L. Tangney; Derrick: Lee Chamberlain; Motor: R. Cowdrey; Floor: Leon Guy Hoy; Floor: [illegible]

Position | Signature

Foreman's Approval

TOOL TALK

Given By:

Subject:

Approved by Operator's Representative: [illegible]

Approved by Foreman: [illegible]

№ 2165 NSW

PAYROLL

HEAD OFFICE PAYROLL COPY

№ 2165 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

HEAD OFFICE PAYROLL COPY

Nº 2164 NSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DHD NO. 11-11 LOCATION: CANDET AUZEA DATE: August 11 1971

REMARKS

	TIME START	TIME STOP	HRS
Stand by No panel (Taking inventory for finding water)	12.00	8.00	8
Stand by wait for Decco report (Fast Boat)	9.00	4.00	8
Max Wait to be Patch. Taking inventory stock			
Stand by Taking inventory	9.00	12.00	8

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR 1 MIDNIGHT - 8 A.M.

TOUR 2 8 A.M. - 4 P.M.

TOUR 3 4 P.M. - MIDNIGHT

INJURIES - COMPLETE BELOW

Position | Signature

Timekeepers Approval

SALES TALK

Given By:

Subject:

Approved by Operator's Representative

Approved by Foreman

Nº 2163 NSW

PAYROLL

DRW DDL-1 HEAD OFFICE PAYROLL COPY

Nº 2163 NSW

POOR COPY

HEAD OFFICE PAYROLL COPY

№ 2162 NSW

PAYROLL

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LEASE SEC. TWP. RGE. W. DATE August 19 71

DIRECTIONS TO WELL SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	SIZE	GRADE	CLASSIFICATION 2	3	4	TOTAL	Date Sorted	Ft. Drilled (Since Sorted)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE BACK

№ 2161

CONSERVATION BOARD COPY

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

DIRECTIONS TO WELL: [illegible]

RIG NO. 11-11 LOCATION: CANDEX [illegible]-A

LAT. LONG. TWP. RGE. W. DATE: August [illegible] 19[illegible] PAGE 11

WAYSIDE POINT: Norman Wells

DISTANCE POINT:

MILES MOVED:

ROAD CONDITIONS:

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speed	Engine	Drill Collars	Length	Sub Wt.
9855	30	9885	5½	[illegible]	165	3		27	[illegible]

Pump No.	Size	Make	Serial No.	Stroke	R.P.M.	Pump Pressure	Liner	Stroke	Pump Output
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	22½	[illegible]

	12 a.m.	2 a.m.	4 a.m.	6 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.	
WEIGHT	9.1			9.1	Mud Type	Gel Chemical				Mud Type					
VISCOSITY	44			46		Fresh									
GEL															
W.L.	F.C.	pH		DESILTER Hours On: 9		D. Flow: 1		D. Flow: 27		SHAKERS Screen Mesh					

REMARKS: Circulate 30 bbls. Warm out Pump 10 gal. Drill mouse hole. Decontaminate tools. Trace sidetrack. Leak detection test.

Driving Line Record: Size | Make | Serial No. | No. Turns | Trips | Total Miles | Total Miles | Miles Since Last Cut | Miles Since Last Cut | Miles Since Last Cut

Time	Remarks	Start	Stop	Hours
	Drilling	8:00	12:00	4
	Rig repair	12:00	3:00	3
	Drilling	3:00	5:00	2
	Rig repair	5:00	6:00	1
	Drilling	6:00	8:00	2

FIRES: DRILLER'S SIGNATURE:

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speed	Engine	Drill Collars	Length	Sub Wt.
9885	26	9911	3½	[illegible]	165	1		27	[illegible]

Pump No.	Size	Make	Serial No.	Stroke	R.P.M.	Pump Pressure	Liner	Stroke	Pump Output
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	22½	[illegible]

	8 a.m.	10 a.m.	12 noon	2 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.	
WEIGHT	9.1		9.1		Mud Type	Gel Chemical				Mud Type
VISCOSITY	44		44			Fresh				
GEL										
W.L.	F.C.	pH		DESILTER Hours On: 9		D. Flow: 2		D. Flow: 27		SHAKERS Screen Mesh

REMARKS: Drill mouse hole. Change connection. Drill rat hole. Pick up Drill Collars.

Driving Line Record: Size | Make | Serial No. | No. Turns | Trips | Total Miles | Total Miles | Miles Since Last Cut | Miles Since Last Cut | Miles Since Last Cut

Time	Remarks	Start	Stop	Hours
	Drilling	8:00	10:00	2
	NCC Cut - [illegible]	10:00	11:00	1
	Tri [illegible]	11:00	12:00	1
	Drilling	12:00	1:00	1
	Rig repair	1:00	2:00	1
	Drilling	2:00	4:00	2

FIRES: DRILLER'S SIGNATURE:

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speed	Engine	Drill Collars	Length	Sub Wt.
9911	4	9915.9	4¾	[illegible]	165	4	Wilcox Stabilizer	27	3

Pump No.	Size	Make	Serial No.	Stroke	R.P.M.	Pump Pressure	Liner	Stroke	Pump Output
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	22½	[illegible]

	4 a.m.	6 a.m.	8 a.m.	10 a.m.		12 noon	2 p.m.	4 p.m.	6 p.m.	
WEIGHT					Mud Type	Gel Chemical				Mud Type
VISCOSITY	44					Fresh				
GEL										
W.L.	F.C.	pH		DESILTER Hours On: 4		D. Flow: 12		D. Flow: 27		SHAKERS Screen Mesh

REMARKS: [illegible]

Driving Line Record: Size | Make | Serial No. | No. Turns | Trips | Total Miles | Total Miles | Miles Since Last Cut | Miles Since Last Cut | Miles Since Last Cut

Time	Remarks	Start	Stop	Hours
	Drilling	4:00	6:00	2
	NCC Cut - [illegible]	6:00	7:00	1
	Drilling	7:00	8:00	1
	NCC Cut - Cutbank [illegible]	8:00	10:00	2
	Drilling	10:00	12:00	2

FIRES: DRILLER'S SIGNATURE:

B.O.P.	Tested	Opened Time	Kelly Cock	Pressure & Test Inspection Date
Model				
Pipe Rams				
Blind Rams				

NOTCH RING ON BIT: Better Guaranteed: No

Connection Check On: Rig Service Check On: Daily Check On: Fire Drills On:

Fuel on Hand 12:01 a.m.: [illegible] gals.

Fuel Rec. & Delivered (Hours): [illegible] gals.

TOTAL: [illegible] gals.

Fuel on Hand 11:59 p.m. (Hours): [illegible] gals.

FUEL USED: [illegible] gals.

RAN: [illegible] FT. [illegible] CSG.

FT. USED: [illegible] FT. [illegible]

P.U. [illegible] S.O. [illegible]

CEMENT RETURNS: [illegible] SACKS

EQUIPMENT CHANGES: TRANSFER 2

DATE FROM SPUD:

TOTAL COMPANY TIME: [illegible] HRS. TOTAL CONTRACTOR TIME: [illegible] HRS.

Approved by Operator's Representative:

Approved by Toolpusher:

DRILL PIPE	Size	Grade	CLASSIFICATION 1	2	3	TOTAL	Date Delivered	Hr. Drilled since Delivery	Tested By	CALIPER DATE	RESULTS	FROM FIRE WITH

CONSERVATION BOARD COPY

№ 2100 NSW

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 11-11 LOCATION CARLOS A.W.A. LSD SEC TWP RGE W DATE August 7 19 71

MAILING POINT Nanaimo SHIPPING POINT MILES MOVED ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speeds	Gauges	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.R.A. Fill Factor
7751	24	7775	5		160	2							27	27

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.	
WEIGHT				7.7	No. 1					No. 1					
VISCOSITY				45											
GEL															

W.L. P.H. pH DESILTER Hours On: U. Flow: D. Flow: SAND % Vol. Sand

Drilling Time Record: Size, Make, Serial No., No. Cones, Trips, Type Mileage, Total Mileage, Year, Cat, All Mileage, Hours Since Out, Hours Total, No. Left in Service

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speeds	Gauges	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.R.A. Fill Factor
7775	36	7811	4		160	1							27	27

	6 a.m.	12 m.	12 noon	2 p.m.		6 a.m.	8 a.m.	12 noon	2 p.m.		6 a.m.	7 a.m.	12 noon	2 p.m.	
WEIGHT	8.7	8.7		8.7	No. 1					No. 1					
VISCOSITY	45	45		45											
GEL															

W.L. P.H. pH DESILTER Hours On: U. Flow: D. Flow: SAND % Vol. Sand

Drilling Time Record: Size, Make, Serial No., No. Cones, Trips, Type Mileage, Total Mileage, Year, Cat, All Mileage, Hours Since Out, Hours Total, No. Left in Service

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Speeds	Gauges	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.R.A. Fill Factor
7811	44	7855	4½		160	4							27	27

	6 a.m.	8 a.m.	10 a.m.	12 noon		6 a.m.	8 a.m.	10 a.m.	12 noon		6 a.m.	8 a.m.	10 a.m.	12 noon	
WEIGHT	8.7				No. 1					No. 1					
VISCOSITY	45														
GEL															

W.L. P.H. pH DESILTER Hours On: 8 U. Flow: 7.1 D. Flow: 7.1 SAND % Vol. Sand

Drilling Time Record: Size, Make, Serial No., No. Cones, Trips, Type Mileage, Total Mileage, Year, Cat, All Mileage, Hours Since Out, Hours Total, No. Left in Service

REMARKS	TIME START	TIME STOP	TIME TOTAL
[illegible]	12 00		6
[illegible]	12	1	6
[illegible]	1	2	1½
[illegible]	2		6
[illegible]		4	1½
[illegible]	4	7	1½
[illegible]	7		1½
[illegible]		7	1½
[illegible]	7		
[illegible]	8		
FIRES			

DRILLER'S SIGNATURE

Drilling	8 00	10	2
Rig Check	10 00	11 00	1½
Drilling	11 00	1 00	2
Rig Check	1 00	2 00	1
Tool Check	2 00	4	1½
[illegible]			
FIRES			

DRILLER'S SIGNATURE

[illegible]	4 00	4	½
Drilling	4 00	6 00	2
Rig Check	6 00	8 15	2½
Drilling	8 15	10 00	1½
Rig Check	10 00	11 30	1½
Drilling	11	12	1
FIRES			

B.O.P.	Tested	Operated Daily	Pipe Rams	Blind Rams	Working & Test Pressure Gauge
Model					
Pipe Rams					
Blind Rams					

Drawn on Model Chk. #, Big Sponge Chk. #, Nodal Gauge Chk. #, Fire Fighter Chk. #

Fuel on Hand 12:01 a.m. gals. Fuel Rec. (Today) gals. TOTAL gals. Fuel on Hand 11:59 p.m. gals. FUEL USED gals.

RAN: PS TOO. TO: PR. CORD: SAT. CTN. POLE SIZING: A.M. P.M.

CEMENT RETURNS (YES/NO)

VERED RING ON BIT #: Bailer Operated Yes

EQUIPMENT CHANGES — DRILLER'S SIGNATURE — TRANSFER #

DAYS FROM SPUD:

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator or Representative

Approved by Toolpusher

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Date Received	Hr. On Hand (Joints Rejected)	Hours Of Service	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 2159

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-41 LOCATION Cangee Mill A LSD SEC. TWP. RGE. W. DATE August 16 1971

DIRECTIONS TO WELL Left 2 [illegible] Office MAILING POINT Nanton SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START / STOP / HRS.

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2155

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CANDLE MESA LSD SEC TWP RGE W DATE Aug 5 1944

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT MILES MOVED ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B.H.	Hole Size
9612	30	9642	[illegible]	46.50	161	1	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	11

Bit No.	Size	Type	Manufacturer	Serial No.	Jets	Depth In	Footage	Hours	Condition	No.	Nozzles	No.	Pump Pressure	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	12 mn.	3 a.m.	6 a.m.	9 a.m.		12 mn.	3 a.m.	6 a.m.	9 a.m.		12 mn.	3 a.m.	6 a.m.	9 a.m.	
WEIGHT				46	No. 1	[illegible]				No. 2	[illegible]				1
VISCOSITY				42	MODEL	[illegible]				MODEL	[illegible]				2
GEL															3

M.L. F.C. pH 9 DESILTER Hours On 5 U. Flow 11 O. Flow 11 SURVEYS Degrees Depth 4 5 6 Weather Water Temp.

[illegible]

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Trips	Feet Cut	Air Miles	Rate Miles Air Cut	Hours Drilling	Air Miles Hours

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B.H.	Hole Size
9642	[illegible]	[illegible]	7		16								27	2

Bit No.	Size	Type	Manufacturer	Serial No.	Jets	Depth In	Footage	Hours	Condition	No.	Nozzles	No.	Pump Pressure	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	6 a.m.	12 m.	12 mn.	3 a.m.		6 a.m.	9 a.m.	12 mn.	3 a.m.		6 a.m.	9 a.m.	12 mn.	3 a.m.	
WEIGHT	[illegible]	[illegible]	[illegible]	[illegible]	No. 1					No. 2					1
VISCOSITY	[illegible]	[illegible]	[illegible]	[illegible]	MODEL					MODEL					2
GEL															3

M.L. F.C. pH 9 DESILTER Hours On 9 U. Flow 11 O. Flow 11 SURVEYS Degrees Depth 4 5 6 Weather Water Temp.

[illegible]

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Trips	Feet Cut	Air Miles	Rate Miles Air Cut	Hours Drilling	Air Miles Hours

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B.H.	Hole Size
9740	3	9742	[illegible]		16								27	2

Bit No.	Size	Type	Manufacturer	Serial No.	Jets	Depth In	Footage	Hours	Condition	No.	Nozzles	No.	Pump Pressure	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	6 a.m.	9 a.m.	12 mn.	3 a.m.		6 a.m.	9 a.m.	12 mn.	3 a.m.		6 a.m.	9 a.m.	12 mn.	3 a.m.	
WEIGHT	[illegible]	[illegible]	[illegible]	[illegible]	No. 1					No. 2					1
VISCOSITY	[illegible]	[illegible]	[illegible]	[illegible]	MODEL					MODEL					2
GEL															3

M.L. F.C. pH 9 DESILTER Hours On 9 U. Flow 11 O. Flow 1 SURVEYS Degrees Depth 4 5 6 Weather Water Temp.

[illegible]

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Trips	Feet Cut	Air Miles	Rate Miles Air Cut	Hours Drilling	Air Miles Hours

REMARKS	TIME START	TIME STOP	TIME INTVL
[illegible]	12 00	12 [illegible]	[illegible]
[illegible]	12 [illegible]	1 [illegible]	1
[illegible]	1 [illegible]	2 [illegible]	[illegible]
[illegible]	2	4 [illegible]	1½
[illegible]		4 [illegible]	1½
At 9 [illegible] Tuesday August 2nd 44			
FIRES	DRILLER'S SIGNATURE		
[illegible]	3 00	7 00	4
[illegible]	7	10	1½
[illegible]	10	10	2
[illegible]	12	2	1½
[illegible]		4	2
FIRES	DRILLER'S SIGNATURE		
[illegible]	4 00	4 [illegible]	[illegible]
[illegible]	4	5	[illegible]
[illegible]	5	5 30	[illegible]
[illegible]	5 30	9 00	3½
[illegible]	9	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	1
[illegible]	1	1	[illegible]
[illegible]	1	2	2
FIRES	DRILLER'S SIGNATURE		

B.O.P.	Tested	Opened Tong	Pipe Jack	Packing & Seal Inspected Date
Model				
Pipe Rams				
Blind Rams				

Casing & Joints Chk. #
Rig Repairs Chk. #
Daily Cash Chk. #
Fuel Repairs Chk. #

Fuel on Hand (2:01 a.m.) gals.
Fuel Rec. & Today (add) gals.
TOTAL gals.
Fuel on Hand (11:59 p.m. (subtract) gals.
FUEL USED gals.

[redacted] Bar. [illegible] CNG
TO RR. USED TAX CSH
PUMP FUEL DOWN A.M. P.M.
CEMENT RETURNS (YES, NO)

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY FUEL GAS.
TOTAL CONSUMER'S FUEL GAS.

Approved by Operator's Representative
Approved by Tool pusher

NOTICED RING ON BIT #
Motor Operated Hr.

DRILL PIPE	Size	Weight	CLASSIFICATION 2	3	4	TOTAL	Date Sample	Pt. Drilled since Sample	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

DRW. CON. 1

CONSERVATION BOARD COPY

№ 2157

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. CANDEX MUI-4 LEASE NOLMAN WELL DATE Aug 1971

REMARKS	TIME START	TIME STOP	TIME INTVL
CHANGING GEAR MOTORS	12:00	4:00	4
ROPE - MEASURE IN MAIN HOOK			
FIRES	DRILLER'S SIGNATURE		
INSTALL NEW GEAR MOTORS	4:00	4:00	4
TAKE OFF WORKING CABLE			
REPAIR SAME			
START RUNNING ON NEW WORKING CABLE			
FIRES	DRILLER'S SIGNATURE		
COMPLETE INSTALLING GEARS	4:00	6:00	2
TRIPPING IN	6:00	8:00	2
TRIPPING IN	8:00	12:00	4
SHORT TRIPPING MIN			
CONE SCRAPING			
ONLY TIME RUNNING ON MIDNIGHT			
FIRES	DRILLER'S SIGNATURE		

EQUIPMENT CHANGES

DAYS FROM SPUD 19d

CONSERVATION BOARD COPY

№ 2156

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 11-11 LOCATION CANGE Mesa Springs LSD SEC TWP RGE W DATE August 1 196 7

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Wt. Bit Type (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	No. of Joints
1662	14	1676	3	[illegible]	160	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	21

No.	Size	Type	Jet Sizes	Serial No.	Depth	S.P.M.	Pump Pressure	No.	Removed	No.	Bit Hours	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

	12 mn.	2 a.m.	4 a.m.	6 a.m.		12 mn.	2 a.m.	4 a.m.	6 a.m.		12 mn.	2 a.m.	4 a.m.	6 a.m.	Hours for Change
WEIGHT				11	No. 1					No. 2					1
VISCOSITY				45	MODEL					MODEL					2
GEL															3
W.L.		F.C.		pH	RESISTIVITY Mass. Cp.		U. Flow		O. Flow						4

Mud Type: Gel Chem. Chlorides: 1,000 Ca: 40

Bottom Hole Assembly: 8" Bit, 6 Drill Collars, 4 Drill Pipe

Bottom Line Record	Size	Make	Serial No.	No. Joints	Trips	Ton Miles	Total Miles	Fuel Gal.	Fuel Cost	Air Miles	Mileage Rate	Mileage Cost	Hours Rate	Hours Cost

From	Footage	To	Hrs. on Bottom	Wt. Bit Type (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	No. of Joints
1662					160	4									21

No.	Size	Type	Jet Sizes	Serial No.	Depth	S.P.M.	Pump Pressure	No.	Removed	No.	Bit Hours	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.

	6 a.m.	10 a.m.	12 noon	2 p.m.		6 a.m.	10 a.m.	12 noon	2 p.m.		6 a.m.	10 a.m.	12 noon	2 p.m.	Hours for Change
WEIGHT				11	No. 1					No. 2					1
VISCOSITY				44	MODEL					MODEL					2
GEL															3
W.L.		F.C.		pH	RESISTIVITY Mass. Cp.		U. Flow		O. Flow						4

Mud Type: Gel Chem. Chlorides: 1,000 Ca: 40

Bottom Hole Assembly: 8" Bit, 6 Drill Collars, 4 Drill Pipe

Bottom Line Record	Size	Make	Serial No.	No. Joints	Trips	Ton Miles	Total Miles	Fuel Gal.	Fuel Cost	Air Miles	Mileage Rate	Mileage Cost	Hours Rate	Hours Cost

From	Footage	To	Hrs. on Bottom	Wt. Bit Type (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	No. of Joints
1662					160	4									21

No.	Size	Type	Jet Sizes	Serial No.	Depth	S.P.M.	Pump Pressure	No.	Removed	No.	Bit Hours	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.

	6 a.m.	8 a.m.	10 a.m.	12 noon		6 a.m.	8 a.m.	10 a.m.	12 noon		6 a.m.	8 a.m.	10 a.m.	12 noon	Hours for Change
WEIGHT				11	No. 1	Circulate				No. 2	Circulate				1
VISCOSITY				48	MODEL					MODEL					2
GEL						2									3
W.L.		F.C.		pH	RESISTIVITY Mass. Cp.		U. Flow		O. Flow						4

Mud Type: Gel Chem. Chlorides: 1,000 Ca: 40

Bottom Line Record	Size	Make	Serial No.	No. Joints	Trips	Ton Miles	Total Miles	Fuel Gal.	Fuel Cost	Air Miles	Mileage Rate	Mileage Cost	Hours Rate	Hours Cost

REMARKS	TIME START	TIME STOP	TIME HRS.
[illegible]	12:00	1:00	1½
Tally Swap [illegible]	1:00	2:30	1½
Circulate [illegible]	2:30	3:00	½
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	5:00	7:00	2
[illegible]	7:00	7:30	½
[illegible]	7:30	[illegible]	[illegible]
R. Barber [illegible]			
FIRES	DRILLER'S SIGNATURE		
Rig Svc	8:00	8:15	¼
Tally Swap	8:15	9:30	1¼
Circulate [illegible]	9:30	10:00	½
Try [illegible]	10:00	10:15	¼
[illegible]			
Trip out	10:15	11:00	¾
FIRES	DRILLER'S SIGNATURE		
Trip out	11:00	6:30	7½
Weld [illegible] Change [illegible]	6:30	12:00	5½
Motor			
[illegible]			
FIRES	DRILLER'S SIGNATURE		

B.O.P.	Tested	Pressure Test	Rate Check	Pressure & Test Inspection Date
Model				
Pipe Rams				
Blind Rams				

NOTED RING ON BIT @ Spare Operated No.

Change in Mud Chk #

Bit Record Chk #

Kelly Cock Chk #

Pump Repair Chk #

Fuel on Hand 12:00 p.m. gals.

Fuel Rec. in Today (add) gals.

TOTAL gals.

Fuel on Hand 11:59 p.m. (deduct) gals.

FUEL USED gals.

BAR. IN. CMG

NO. KW. USED CAT CSM

FOUR DOWN A.M. P.M.

CEMENT RETURNS (YES, NO)

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DAYS FROM SPUD 1 2 7

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool Pusher

DRILL PIPE	Size	Weight	CLASSIFICATION 3	2	1	TOTAL	Date Received	Ft. Drilled since Receipt	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

DRW. DALL.

CONSERVATION BOARD COPY

№ 2155

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

BIG NO. 11-11 LOCATION

LSD SEC TWP RGE W DATE

MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS

FIRES

DRILLER'S SIGNATURE

S.O.P. Tested Expected Time Pull Line Pressure & Time Pressure Gauge Reading

Mud: Fine Bars: Grind Bars:

FOTCO RING ON BIT #

Bar Reversed No.

Fuel on Hand 12:01 a.m. gals.

Fuel Rec. & Today (Total) gals.

TOTAL gals.

Fuel on Hand 11:59 p.m. (Inventory) gals.

FUEL USED gals.

TO FR USED TAX CON

PLUS PLUS Sundry A.M. P.M.

CEMENT RETURNING (YES, NO)

DAYS FROM MUD: 143

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Length	CLASSIFICATION 2	3	4	TOTAL	Date Added	Pt. Drilled (Total Footage)	Total Pt. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 2151 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 11 LOCATION LEASE SEC. TWP. RGE. W. DATE August 1-7 1971

MAILING POINT SHIPPING POINT HOLES MOVED ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Bit Size	Type	Serial No.	Nozzles	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	F.B.H. Rotary
7005	5	7010	1½					15'								28

Bit No.	Bit Size	Make	Type	Serial No.	Depth Out	Footage	Hours	Dull Char.	Pump No.	Liner	Stroke	Pump Pressure	S.P.M.	Table Speed	T	B	G
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]			[illegible]					

	12 a.m.	2 a.m.	4 a.m.	6 a.m.		12 p.m.	2 p.m.	4 p.m.	6 p.m.		12 a.m.	2 a.m.	4 a.m.	6 a.m.		Hours Off Charge
WEIGHT				12	No. 1	[illegible]				No. 2				[illegible]	1	
VISCOSITY				42	MODEL	[illegible]				MODEL				[illegible]	2	
GEL															3	
W.L.	F.C.	pH	9	DESILTER: Hours On	9	U. Flow		D. Flow	1						4	
															5	
															6	
															7	
															8	

REMARKS

	Time Start	Time Stop	Total Hrs.
[illegible]	12 00	1 00	1
[illegible]	1 00	3 00	2
[illegible]	3 00	7 00	4
[illegible]	7 00	6 15	23
[illegible]	6 15	7 00	12

FIRES DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Bit Size	Type	Serial No.	Nozzles	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	F.B.H. Rotary
7005	13	7018	9½						1							

Bit No.	Bit Size	Make	Type	Serial No.	Depth Out	Footage	Hours	Dull Char.	Pump No.	Liner	Stroke	Pump Pressure	S.P.M.	Table Speed	T	B	G
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Hours Off Charge
WEIGHT	74			76	No. 1					No. 2					1	
VISCOSITY	44			44	MODEL					MODEL					2	
GEL															3	
W.L.	F.C.	pH	9	DESILTER: Hours On	9	U. Flow		D. Flow							4	
															5	
															6	
															7	
															8	

REMARKS

	Time Start	Time Stop	Total Hrs.
[illegible]	9 00	7 15	12
[illegible]	7 15	1 00	4½
[illegible]	1 00	11 00	12
[illegible]	1 00	11 00	14
[illegible]	11 00	4 00	6
[illegible]	11 00	1 00	12
[illegible]	1 00	1 00	4
[illegible]	1 00	2 00	1
[illegible]	2 00	4 00	12

FIRES DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Bit Size	Type	Serial No.	Nozzles	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	F.B.H. Rotary
7018	39	7057	5½													

Bit No.	Bit Size	Make	Type	Serial No.	Depth Out	Footage	Hours	Dull Char.	Pump No.	Liner	Stroke	Pump Pressure	S.P.M.	Table Speed	T	B	G
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	175	150	[illegible]			

	8 a.m.	9 a.m.	10 a.m.	12 m.		8 a.m.	9 a.m.	10 a.m.	12 m.		8 a.m.	9 a.m.	10 a.m.	12 m.		Hours Off Charge
WEIGHT	[illegible]	9		7	No. 1	[illegible]	[illegible]			No. 2	[illegible]	[illegible]		[illegible]	1	
VISCOSITY	[illegible]	[illegible]		41	MODEL	[illegible]	[illegible]			MODEL	[illegible]	[illegible]		[illegible]	2	
GEL															3	
W.L.	F.C.	pH	9	DESILTER: Hours On	9	U. Flow		D. Flow							4	
															5	
															6	
															7	
															8	

REMARKS

	Time Start	Time Stop	Total Hrs.
[illegible]	4 00	6 00	2½
[illegible]	6 00	8 00	1½
[illegible]	8 00	11 00	3
[illegible]	11 00	12 00	1

FIRES DRILLER'S SIGNATURE

S.O.P.	Turned	Planned Time	Pipe Line	Packing & Seal Inspected Date	Check in Shale Chk #	Fuel on Hand 12:01 a.m.	gals.				
Model					Big Square Chk #	Fuel Rec. & Today (add)	gals.				
Pump Name					Kelly Cock Chk #	TOTAL	gals.	TO	HR. USED	GAL	CON.
Blind Name					Fire Alarm Chk #	Fuel on Hand 11:00 p.m. (subtract)	gals.	FLUID		FLUID DOWN	A.M. P.M.
NOTED RING ON BIT #		Spud Operator		Hrs.		FUEL USED	gals.	CEMENT RETURNS	YES / NO		

DRILL PIPE	Size	Joint	CLASSIFICATION 2	1	0	TOTAL	Pipe Sensor	At Drilled when Sensor	Total At Drilled	CALIPER "+/-"	RESULTS	FROM PIPE RACK

EQUIPMENT CHANGES TRANSFER #

DAYS FROM SPUD:

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tourpusher

CONSERVATION BOARD COPY

№ 2153

POOR COPY

DEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11 LOCATION Carlsbad N.M. LSD SEC TWP RGE W DATE July 21 1971

DIRECTIONS TO WELL [illegible] DRILLING POINT [illegible] MOVING POINT MILES MOVED ROAD CONDITIONS

Hole	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B.H.	Hours on Bottom
		7497			157	4									16

Bit No.	Size	Type	Serial No.	Bought Where	Weight	S.P.M.	Pump Pressure	No.	Diameter	No.	Liner Size	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]													

	12 a.m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 p.m.	4 p.m.	6 p.m.		12 m.	2 p.m.	4 p.m.	6 p.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY				42	MODEL					MODEL					2
GEL															3
W.L.	P.E.	pH	7	DESILTER Hours On 8		Q. Flow			Q. Flow						4
															5
															6
															Weather
															Temp.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Today Miles	Total Miles	Wear Slip to Cut	Air Miles	Date Slip to Cut	Total Slip	Hr. Cut on Sample

REMARKS

	START	STOP	INTVL
[illegible]	12	12	1½
[illegible]	12	[illegible]	8
[illegible]			

FIRES

DRILLER'S SIGNATURE

Hole	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B.H.	Hours on Bottom
		7497													

Bit No.	Size	Type	Serial No.	Bought Where	Weight	S.P.M.	Pump Pressure	No.	Diameter	No.	Liner Size	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]													

	4 a.m.	6 a.m.	8 a.m.	10 a.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		4 a.m.	6 a.m.	8 a.m.	10 a.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					MODEL					MODEL					2
GEL															3
W.L.	P.E.	pH	7	DESILTER Hours On 8		Q. Flow			Q. Flow						4
															5
															6
															Weather
															Temp.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Today Miles	Total Miles	Wear Slip to Cut	Air Miles	Date Slip to Cut	Total Slip	Hr. Cut on Sample

REMARKS

	START	STOP	INTVL
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]			

FIRES

DRILLER'S SIGNATURE

Hole	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B.H.	Hours on Bottom
		7497			157	4								27	16

Bit No.	Size	Type	Serial No.	Bought Where	Weight	S.P.M.	Pump Pressure	No.	Diameter	No.	Liner Size	Pump Pressure	S.P.M.	Pump Pressure	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]													

	4 a.m.	6 a.m.	8 a.m.	10 a.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		4 a.m.	6 a.m.	8 a.m.	10 a.m.	
WEIGHT					No. 1					No. 2					1
VISCOSITY					MODEL					MODEL					2
GEL															3
W.L.	P.E.	pH	7	DESILTER Hours On 8		Q. Flow 141			Q. Flow 7						4
															5
															6
															Weather
															Temp.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Today Miles	Total Miles	Wear Slip to Cut	Air Miles	Date Slip to Cut	Total Slip	Hr. Cut on Sample

REMARKS

	START	STOP	INTVL
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]			

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Pressure Test	Rig Inspector	Pulling & Test Inspection Form
Model:				
Pipe Rams:				
Blind Rams:				
FITTED RING ON KIT #		Spare Operated	No.	

Check in mud: Chk #	Rig Service: Chk #	Daily Check: Chk #	Rig Repair: Chk #

Fuel on Hand 12:01 a.m.	gals.	
Fuel Rec. (Today Total)	gals.	
TOTAL	gals.	
Fuel on Hand 11:59 p.m. (Inventory)	gals.	
FUEL USED	gals.	

[redacted]	RAN	PU	CSG
TD	HR. USED	SAT	CSH
FLUID Degrees			A.M. P.M.
CEMENT RETURNS (YES/NO)			

EQUIPMENT CHANGES

DATE FROM SPUD:

TOTAL COMPANY FUEL gals. | TOTAL CONTRACTOR'S FUEL gals.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Grade	CLASSIFICATION 3	2	4	TOTAL	Date Sampled	Ft. Drilled Since Sampled	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

Transfer #

CONSERVATION BOARD COPY

№ 2152

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME — START, END, TOTAL

FIRES

DRILLER'S SIGNATURE

WEIGHT

VISCOSITY

GEL

W.L. F.C. pH

DEVIATION

CONTRACTOR

Drilling Line Record

Size Make Serial No. No. Lines Trips Ton Miles Total Miles

E.O.P. Tested Opened Time Pressure Leak Tested Signature

Model

Flow Nozzle

Blind Nozzle

TOTED RING ON BIT #

Barter Operator No.

Fuel on Hand 12.01 a.m.

Fuel Rec. (Tanks Loaded)

TOTAL

Fuel on Hand 11.59 p.m.

FUEL USED

DRILL PIPE Size Weight CLASSIFICATION 2 3 4 TOTAL Date Bought Hr. Drilled Since Bought Total Hr. Drilled CALIPER DATE RESULTS FROM PIPE RACK

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 2171 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO:

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

Pump	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		Hour Of Change
WEIGHT					No. 1						No. 2				1	
VISCOSITY					MODEL						MODEL				2	
GEL															3	
W.L.	P.C.	pH			DESILTER: Hours On:		G. Flow:		G. Flow:						4	
															5	
															6	
															7	
															Weather	Water
															Temp.	Bars

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rate Slip or Cut	Wear Drop	Ft. Left on Spool

REMARKS

TIME		
START	END	TOTAL

FIRES

DRILLER'S SIGNATURE

Pump	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Hour Of Change
WEIGHT					No. 1						No. 2				1	
VISCOSITY					MODEL						MODEL				2	
GEL															3	
W.L.	P.C.	pH			DESILTER: Hours On:		G. Flow:		G. Flow:						4	
															5	
															6	
															7	
															Weather	Water
															Temp.	Bars

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rate Slip or Cut	Wear Drop	Ft. Left on Spool

FIRES

DRILLER'S SIGNATURE

Pump	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom

	4 p.m.	6 p.m.	8 p.m.	10 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		Hour Of Change
WEIGHT					No. 1						No. 2				1	
VISCOSITY					MODEL						MODEL				2	
GEL															3	
W.L.	P.C.	pH			DESILTER: Hours On:		G. Flow:		G. Flow:						4	
															5	
															6	
															7	
															Weather	Water
															Temp.	Bars

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Rate Slip or Cut	Wear Drop	Ft. Left on Spool

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Expected Time	Rig Down	Rigging & Test Completed Date
Make:				
Pipe & Blind:				
Drill Rods:				

NOTED RING ON B.T. #

Rotor Guaranteed No.

Ground to mud: Chk #

Rig Up on: Chk #

Kelly Cock Chk #

Rig Down: Chk #

Fuel on Hand (2:01 a.m.) gals.

Fuel Rec. d Today (gals) gals.

TOTAL gals.

Fuel on Hand (11:59 p.m. (gals)) gals.

FUEL USED gals.

RAN TO CHG

TO USED SAT. CON.

FUEL DRAWN A.M. P.M.

STOCKS RETURNED YES/NO

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DATE FROM DRUG

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Ft. Delivered (Since Delivery)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 2110 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

CONSERVATION BOARD COPY

№ 1999 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO:

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED RD'S CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

FUEL USED

CLASSIFICATION

CALIPER DATE

RESULTS

FROM PIPE BACK

CONSERVATION BOARD COPY

NE 1995

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIGURES

DRILLER'S SIGNATURE

FIGURES

DRILLER'S SIGNATURE

FIGURES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1997

VERY - VERY - VERY

POOR COPY

DEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO

AREA MAILING POINT SHIPPING POINT MILES MOVED NO. & CONDITIONS

REMARKES

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

EQUIPMENT CHANGES

TRANSFER #

TOTAL

FUEL USED

DATE FROM RIG

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool Pusher

CONSERVATION BOARD COPY

№ 1996

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. ____ LOCATION ____ LSD ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____ Pg. ____

DIRECTIONS TO ____ MAILING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

WELL ____

Pipe	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S. Pt.	Ft. up on Kelly

Bit No.	Size	Make	Type	Serial No.	Jets	Depth Out	Footage	Hours	Cond.	Bit Wt.	Rotary Speed	Pump Pressure	S.P.M.	Pump Output	%	%	%

	12 a.m.	2 a.m.	4 a.m.	6 a.m.		12 noon	2 p.m.	4 p.m.	6 p.m.		12 mid.	2 a.m.	4 a.m.	6 a.m.		Total Hrs. Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MUDDY					MUDDY					2	
GEL															3	
W.L.	F.C.	pH			DESILTER, Hours On			O. Flow		O. Flow					4	
															5	
															6	
															7	
															8	

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Wear or Cut	Air Miles	Slip or Cut	Wear Slip	Ft. Left on Spool

REMARKS

TIME		
START	END	HRS.

FIRES ____ DRILLER'S SIGNATURE ____

Pipe	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S. Pt.	Ft. up on Kelly

Bit No.	Size	Make	Type	Serial No.	Jets	Depth Out	Footage	Hours	Cond.	Bit Wt.	Rotary Speed	Pump Pressure	S.P.M.	Pump Output	%	%	%

	6 a.m.	10 a.m.	12 noon	2 p.m.		6 a.m.	10 a.m.	12 noon	2 p.m.		6 a.m.	10 a.m.	12 noon	2 p.m.		Total Hrs. Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MUDDY					MUDDY					2	
GEL															3	
W.L.	F.C.	pH			DESILTER, Hours On			O. Flow		O. Flow					4	
															5	
															6	
															7	
															8	

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Wear or Cut	Air Miles	Slip or Cut	Wear Slip	Ft. Left on Spool

FIRES ____ DRILLER'S SIGNATURE ____

Pipe	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S. Pt.	Ft. up on Kelly

Bit No.	Size	Make	Type	Serial No.	Jets	Depth Out	Footage	Hours	Cond.	Bit Wt.	Rotary Speed	Pump Pressure	S.P.M.	Pump Output	%	%	%

	4 a.m.	6 a.m.	8 a.m.	10 a.m.		4 a.m.	6 a.m.	8 p.m.	10 p.m.		4 a.m.	6 a.m.	8 a.m.	10 a.m.		Total Hrs. Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MUDDY					MUDDY					2	
GEL															3	
W.L.	F.C.	pH			DESILTER, Hours On			O. Flow		O. Flow					4	
															5	
															6	
															7	
															8	

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Wear or Cut	Air Miles	Slip or Cut	Wear Slip	Ft. Left on Spool

FIRES ____ DRILLER'S SIGNATURE ____

B.O.P.	Tested	Pressure Test	Pipe Line	Packing & Ram Inspected Date
W.O.C.				
Pipe R. no.				
Drill Rate				

NOTED RING ON BIT #

Boiler Operated: Hrs.

Crown-o-matic Chk #

Rig Savers Chk #

Kelly Cock Chk #

Fire Alarm Chk #

Fuel on Hand 3:00 a.m.	gals.	
Fuel Rec. & Taken (add)	gals.	
TOTAL	gals.	
Fuel on Hand 11:59 p.m. (subtract)	gals.	
FUEL USED	gals.	

RAN ____ PR ____ CSG ____

NO. ____ KS. USED ____ SKS ____ CEM. ____

PLUG ____ PLUG DOWN ____ A.M. P.M.

CEMENT RETURNS: YES / NO

EQUIPMENT CHANGES ____ TRANSFER #

DATE FROM WHR. ____

TOTAL COMPANY TIME ____ HRS. ____ TOTAL CONTRACTOR'S TIME ____ HRS. ____

Approved for Operator's Representative ____

Approved for Contractor ____

DRILL PIPE	Size	Joint	CLASSIFICATION 1	2	3	4	TOTAL	Date Delivered	Ft. Drilled Since Delivery	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM TIPS RACK

CONSERVATION BOARD COPY

№ 1995 NSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL

MAILING POINT SHIPPING POINT MILES MOVED RIG CONDITIONS

REMARKS

TIME START STOP UNITS

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

EQUIPMENT CHANGES TRANSFER #

TOTAL

FUEL USED

CLASSIFICATION

CALIPER DATE RESULTS

CONSERVATION BOARD COPY

1994

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. ____ LOCATION ____ LSD ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____ 19__

SECTION 19

WELL ____ MAILING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

REMARKES

TIME: START | STOP | TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

B.O.P. | Tested | Pressure Test | Pipe Rams | Blind Rams | Packing & Test Inspection Date | Crown-o-matic Chk. A | Rig Sav-ers Chk. A | Racks Catch Chk. A | Fire Resch Chk. A

Fuel on Hand (2.00 p.m.) ____ gals

Fuel Rec. (Today only) ____ gals

TOTAL ____ gals

Fuel on Hand (11.59 p.m. Today) ____ gals

FUEL USED ____ gals

TESTED KIND ON BIT #

Driller's or Operator's ____ Hrs

DAYS FROM SPUD

TOTAL COMPANY TIME ____ HRS.

TOTAL CONTRACTOR'S TIME ____ HRS.

Approved by Operator's Representative

Approved by Toolpusher

BIT NO.	Size	Serial	CLASSIFICATION 2	3	4	TOTAL	Date Spudded	Ft. Drilled (Hole Depth)	Time Ft. Drilled	CALIPER DATE	REMARKS	FROM PIPE RACK

№ 1993 NSW

CONSERVATION BOARD COPY

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

TOTAL

FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CALIPER DATE

HOLE LIFE BACK

CONSERVATION BOARD COPY

№ 1992

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

ROTATING TO WELL MAILING POINT SHIPPING POINT MILES MOVED RIG CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

DRILLER'S SIGNATURE

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1991 NSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED HOLE CONDITIONS

REMARKS

TIME: START STOP TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL OPERATING TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Length	CLASSIFICATION 2	3	4	TOTAL	Date Retest	Ft. Drilled (Hour Formed)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM TIPE BACK

FUEL USED

CONSERVATION BOARD COPY

See Aug 9/71

№ 1990 NSW

HEATH & SHUMWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT; IF INJURY HAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR ① MIDNIGHT - 8 A.M.

TOUR ② 8 A.M. - 4 P.M.

TOUR ③ 4 P.M. - MIDNIGHT

INJURIES - COMPLETE BELOW

SAFETY TALKS

Nº 1989 NSW

PAYROLL

HEAD OFFICE PAYROLL COPY

Nº 1989 NSW

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLING
MEC-GRAB
DRILLING
DRILLING
TRIPPING OUT
RIG-REPAIR

FIRES — DRILLER'S SIGNATURE

TRIP OUT
WAIT ON WATER
WATER FROM LAKE
TRIP IN
TRIP OUT
RIG-REPAIR

FIRES — DRILLER'S SIGNATURE

DRILLING
DRILLING
DRILLING
MEC-GRAB
TRIP OUT
RIG-REPAIR
DRILLING
DRILLING

FIRES — DRILLER'S SIGNATURE

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT; IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR (1) MIDNIGHT - 8 A.M.
Driller
Derrick
Water
Floor: Paston Lachapelle 8
Floor
Floor
INJURIES - COMPLETE BELOW

TOUR (2) 8 A.M. - 4 P.M.
Driller
Derrick
Water
Floor
Floor
Floor
Other
INJURIES - COMPLETE BELOW

TOUR (3) 4 P.M. - MIDNIGHT
Driller: Tony Paquette 8
Derrick
Water
Floor
Floor: Paston Lachapelle 4
Floor
INJURIES - COMPLETE BELOW

Position | Signature

Testpushers Approval

SALES TAXES
Given By:
Subject:

№ 1988 NSW
PAYROLL

№ 1989 NSW

HEAD OFFICE PAYROLL COPY

VERY - VERY - VERY

POOR COPY

SHERWOOD DRILLING (WESTERN)

DRILLING LOG

RIG No. [illegible] LOCATION [illegible]

DATE [illegible] 19 81

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME: START · STOP · [illegible]

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

HEAD OFFICE PAYROLL COPY

Nº 1987 NSW

DATE [illegible] 1981 RIG [illegible]

EMPLOYEE IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT: IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR ① MIDNIGHT - 8 A.M.

		Hrs.
Driller	[illegible]	[illegible]
Derrick	E. W. B[illegible]	[illegible]
Motor		
Floor	Pastor Lachazulle	8
Floor		
Floor		

INJURIES - COMPLETE BELOW

TOUR ② 8 A.M. - 4 P.M.

		Hrs.
Driller	[illegible]	[illegible]
Derrick	[illegible]	
Motor		
Floor	[illegible]	
Floor		
Floor		
Other	[illegible]	2

INJURIES - COMPLETE BELOW

TOUR ③ 4 P.M. - MIDNIGHT

		Hrs.
Driller	[illegible]	8
Derrick	[illegible]	1
Motor		
Floor	[illegible]	4
Floor	Pastor Lachazulle	4
Floor		

INJURIES - COMPLETE BELOW

Toolpushers Approval

SAFETY TALKS

Given By

Subject

Nº 1987 NSW

PAYROLL

WORY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

HEAD OFFICE PAYROLL COPY

№ 1986 NSW

PAYROLL

№ 1986 NSW

WORY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11 LOCATION DANDEE CONSOLIDATED No. 42 LSD. ___ SEC. ___ TWP. ___ RGE. ___ W. ___ DATE JULY 14 1971

DATE JULY 14/71 RIG 11-11

REMARKS

	Start	Stop	Total
TRIP CHECK	8:00	8:15	:15
TRIP LUBRICATE	8:15	8:30	:15
CIRCULATE	8:30	8:50	:20
DRILLING	8:50	9:15	:25
PRE-CHECK	9:15	9:45	:30
DRILLING	9:45	7:45	1:00
RIG SERVICE	7:45	8:00	:15
DRILLING	8:00	10:00	2:00
PRE-CHECK	10:00	11:30	1:30
DRILLING	11:30	2:15	2:45
PRE-CHECK	2:15	2:45	:30
RIG SERVICE	2:45	3:15	:45
TRIP LUBRICATE	4:00	4:30	:30
CIRCULATE	4:30	5:00	:30
DRILLING	5:00	10:00	5:00
PRE-CHECK & RIG SERVICE	10:00	11:30	1:30
DRILLING	11:30	12:00	:30

FIGURES ___ DRILLER'S SIGNATURE

FIGURES ___ DRILLER'S SIGNATURE

FIGURES ___ DRILLER'S SIGNATURE

EMPLOYEES IS REQUIRED TO SIGN PERSONALLY AT THE COMPLETION OF EACH SHIFT IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SHEET ONLY.

TOUR (1) MIDNIGHT - 8 A.M. — No.

Driller ___ 7
Derrick R W Little 7
Motor
Floor
Floor
Floor

INJURIES - COMPLETE BELOW

TOUR (2) 8 A.M. - 4 P.M. — No.

Driller ___ 5
Derrick ___ 5
Motor Lonnie Cullum 5
Floor R Brown 5
Floor
Floor
Floor Lionel Bell 5

INJURIES - COMPLETE BELOW

TOUR (3) 4 P.M. - MIDNIGHT — No.

Driller ___ 2
Derrick ___ 4
Motor
Floor D Brown 4
Floor Victor Lafayette 4
Floor

INJURIES - COMPLETE BELOW

Position	Signature

Textpushers Approval

SAFETY TALKS

Given By

Subject

B.O.P. Tested — Pressure Test — Pipe Rams — Blind Rams — Rotating & Surf. Diverter Sys.

Casing & Drill Pipe Check — Rig Service Chk. — Daily Check Chk. — Fire Equip. Chk.

Fuel on Hand 12:01 a.m. — Fuel Rec. & Today (add) — TOTAL — Fuel on Hand 11:59 p.m. (deduct) — FUEL USED

Mud Check — Weight — Viscosity — Gel

Bit No. 5 — Size 12 1/4 — Make RC — Serial No. ___ — Jets ___ — Hours 9 — Depth 1 — Footage 1 — Dev. 0 — Cond. 1 — Bit Cost ___

Additives — General — Cost

Drilling Line Record — Size — Make — Serial No. — Footage — Total Hours — Ton Miles — Total Miles — Slip & Cut — Hours Slip & Cut — Date Slip & Cut — Hours Since Slip & Cut — Ton Miles Since Slip & Cut — Date Slip & Cut on Tower

Equipment Changes — Transfer #

Date From Shop

Total Contractor Time — Total Contractor's Time

Approved by Operator's Representative

Approved by Toolpusher

Size	Serial	Classification 1	2	3	4	Total	Pipe Entered	Ft. Drilled since Sharpen	Total Ft. Drilled	Caliper Date	Results	High Pipe Rack

HDW DDL-1 HEAD OFFICE PAYROLL COPY

№ 1985 HSW

№ 1985 HSW

PAYROLL

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DATE JULY 13/71

REMARKS

	TIME START	TIME STOP
DRILLING	6:00	8:00
REC. CORE	8:00	9:15
DRILLING	9:15	11:00
REC. CORE	11:00	12:15
DRILLING	12:15	2:45
CIRCULATING FOR TRIP	2:45	3:30
RIG SERVICE	3:30	4:00
TRIP OUT	4:00	7:00
TRIP OUT	7:00	12:00
MECHANICAL CHECK	12:00	1:00
TRIP IN	1:00	3:00
RIG SERVICE	3:00	4:00
TRIP IN	4:00	7:00
REAM & WASH	7:00	7:15
CIRCULATE	7:15	7:30
DRILLING	7:30	11:00
REC. CORE	11:00	11:30
RIG SERVICE	11:30	12:00

FIRES — DRILLER'S SIGNATURE

EMPLOYEE IS REQUIRED TO SIGN PERSONAL LOG IN THE COMPLETION OF EACH SHIFT. IF INJURY WAS RECEIVED SIGN AT BOTTOM OF SAFETY ONLY.

TOUR (1) MIDNIGHT - 8 A.M.

Driller: R. W. Butler

INJURIES COMPLETE BELOW

TOUR (2) 8 A.M. - 4 P.M.

INJURIES COMPLETE BELOW

TOUR (3) 4 P.M. - MIDNIGHT

INJURIES COMPLETE BELOW

EQUIPMENT CHANGES

SAFETY TALKS

Given By:

Subject:

Toolpushers Approval

HEAD OFFICE PAYROLL COPY

№ 1984 HSW

PAYROLL

POOR COPY

HEATH & SPENCER DRILLING (WESTERN)

DAILY DRILLING LOG

Rig No. 1-11 Location CANADA DAHADINNI M-43 Date JULY 12 '71

Lat. 61°58'59" Long. 134°39'15.7" Nearest Point NORMAN WELLS

Miles Moved: Road Conditions:

Time	Footage	To	Hrs. on Bottom	Drill Pipe (1000 lbs.)	Pounds	Engine	Drill Collars
22	27	4449	4.45	3.000	140	2	20

Weight	Viscosity	Gel
73	48	

Deviation: Hours On 8 | Deg. 7½ | Deg. 1½

General: 2 Gal. Fuel Oil

Time	Footage	To	Hrs. on Bottom	Drill Pipe (1000 lbs.)	Pounds	Engine	Drill Collars
449	33	4482	5.30	3.000	140	4	11

Weight	Viscosity	Gel
75	46	

Deviation: Hours On 9

General: 2 Gal. Fuel Oil

Time	Footage	To	Hrs. on Bottom	Drill Pipe (1000 lbs.)	Pounds	Engine	Drill Collars
482	29	4511	5.15	3.000	141	2	19

Weight	Viscosity	Gel
72	45	

Deviation: Hours On 9 | Deg. 7¼ | Deg. 7½

General: 2 Gal. Fuel Oil

Remarks	Time Start	Time Stop	Hrs.
Rig Late	10:00	12:30	2.0
Drilling	12:30	4:00	3.0
Rec. Core	4:00	4:45	.45
Total Survey	4:45	5:00	.15
Circulate	5:00	5:30	.30
Drilling	5:30	7:45	2.15
Rig Service	7:45	8:00	.15
Fines			
Drilling	8:00	10:00	2.00
Rec. Core	10:00	10:45	.45
Circulate	10:45	11:30	.45
Drilling	11:30	3:00	3.30
Rec. Core	3:00	3:45	.45
Rig Service	3:45	4:00	.15
Fines			
Total Survey	4:00	4:15	.15
Circulate	4:15	4:30	.15
Drilling	4:30	9:00	4.30
Rec. Core / Rig Service	9:00	10:15	1.15
Drilling	10:15	12:00	1.45
Fines			

Date July 12, 1971 Rig 11-11

Employee is required to sign personally at the completion of each shift if injury has received sign at bottom of sheet only.

Tour 1 Midnight - 8 A.M.: Driller; Derrick R. W. Butler; Motor; Floor; Floor; Floor

Injuries - Complete Below

Tour 2 8 A.M. - 4 P.M.: Driller; Derrick; Motor; Floor; Floor; Floor; Floor Earl Lidel

Injuries - Complete Below

Tour 3 4 P.M. - Midnight: Driller; Derrick; Motor; Floor R. J. Bentley; Floor Victor Lafrenière; Floor

Injuries - Complete Below

Foreman Changes: Transfer To

Safety Talks: Given By; Subject

Approved by Operator's Representative

Approved by Toolpusher

№ 1983 HSW

Payroll

HEAD OFFICE PAYROLL COPY

№ 1983 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1082 HSW

POOR COPY

HEATH'S SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG No. 24 LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITION

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1981 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1980 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD

Approved by Operator's Representative

Approved by Testpacker

CONSERVATION BOARD COPY

№ 1979

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1978 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1977 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1976 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. W. DATE

DRILLING POINT

DEPARTING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME: START | FINISH | HOURS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

R.O.P.

FUEL USED

DATE FROM SPUD

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1825 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DRILLING TO

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START | STOP | TOTAL

FIRES

DRILLER'S SIGNATURE

DRILL COLLARS

WEIGHT

VISCOSITY

GEL

W.L. P.H. pH

DESILTER

Weather Water

Tanks

S.O.P. Total Diesel Fuel Used Fuel Received

Mud Sacks Chk #

Mud Tank Chk #

Fuel Tank Chk #

TOTAL

FUEL USED

Water Received

CLASSIFICATION 2 3 4 TOTAL

CALIPER DATE

FROM TIME BACK

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1824 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

MAILING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1823

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC. TWP. RGE. W. DATE

DIRECTIONS TO WELL

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approximate Operator's Representative

Approximate Tangent

CONSERVATION BOARD COPY

№ 1822 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

DRILL COLLARS

REMARKS

TIME: START STOP INTVL

WEIGHT VISCOSITY GEL

DRILLER'S SIGNATURE

FIRES

B.O.P. Tested Expected Time Pulls Made Running & Bent Hole Set Down

Fuel on Hand 12:01 a.m. TOTAL FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY FUEL

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE Size Joint CLASSIFICATION 2 3 4 TOTAL Bent Bodies Pin Drilled Joint Tubes Total Pin Drilled CALIPER DATE RESULTS FROM PIPE RACK

CONSERVATION BOARD COPY

No 1821 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

FUEL USED

CONSERVATION BOARD COPY

№ 1820

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

CONSERVATION BOARD COPY

№ 1819 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTION OF WELL

RIG NO. LOCATION LAND SEC. TWP. RGE. W. DATE

HAULING POINT MOVING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

START STOP HRS.

FIRES

DRILLER'S SIGNATURE

S.O.P.

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1818 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONAL TEST
WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE YR.
MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Tested Pressure Test Date Pressure & Test Inspection Date

Rotary Operated Hrs.

RATED RING ON BIT @

Fuel on Hand (5:00 a.m.) GALS.
Fuel Rec'd Today (gals) GALS.
TOTAL GALS.
Fuel on Hand 11:59 p.m. (gals) GALS.
FUEL USED GALS.

Rig Service Clock #
Rig Service Clock #
Rig Service Clock #
Rig Service Clock #

BBLS. TO USED BBLS. CEM.
FLUID DENSITY P.P.G.
CONCRETE RESERVE (YES / NO)

EQUIPMENT CHANGES TRANSFER

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Pr. Drilled since Delivery	Total Pr. Drilled	CALIPER DATE	REGRETS	FROM TIPE RACK

CONSERVATION BOARD COPY

№ 1817 HSW

POOR COPY

...TH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

DRILLING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME START END

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TOTAL

FUEL USED

DAYS FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CALIPER DATE

CONSERVATION BOARD COPY

№ 1910 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

HAULING POINT SUPPLYING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME — START STOP

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 19 0 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

REF. NO. LOCATION LSD SEC TWP RGE W DATE

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START FINISH HRS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

B.O.P.

FUEL USED

TOTAL

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE	Size	Grade	CLASSIFICATION 1	2	3	TOTAL	Date Received	Sent to Drilled	Sent to Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1899 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT

MILES MOVED ROAD CONDITIONS

REMARKS

TIMES

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM WHEN

CONSERVATION BOARD COPY

№ 1898 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONS TO WELL

RIG NO. ____ LOCATION ____ LSD ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____ 19__

HAULING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

REMARKS

TIME: START | CODE | INFO

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. | Drilled | Cleaned Filling | Wear Joint | Packing & Test

Water Hauled

TOTAL KWH ON KIT

FUEL USED

TOTAL

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Taxpayer

DRILL PIPE | Tier | Joints | CLASSIFICATION 2 | 3 | 4 | TOTAL | Date Sampled | Ft. Drilled since Sampled | Total Ft. Drilled | CALIPER DATE | FOOTS | FROM LIVE RACK

CONSERVATION BOARD COPY

№ 1897 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME — START STOP HRS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

B.O.P. TESTED

TESTED KING ON SET #

TOTAL

FUEL USED

DATE FROM DRILL

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE — CLASSIFICATION — TOTAL

CONSERVATION BOARD COPY

№ 1898 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

LOCATION

LSD SEC TWP RGE W DATE

BEGINNING POINT

ENDING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

START STOP DATE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved By Operator's Representative

Approved By Tool pusher

CLASSIFICATION

CALIPER DATE

RESULTS

FROM TYPE RADE

CONSERVATION BOARD COPY

№ 1895 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, END, HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Equipment Tests Pipe Rams Blind Rams

TOTED RING ON KIT #

Boiler Operated Hrs.

CLASSIFICATION 1 2 3 4 TOTAL

Fuel on Hand 12:01 a.m. gals.

Fuel Rec. d Today (gals) gals.

TOTAL gals.

Fuel on Hand 11:59 p.m. (midnight) gals.

FUEL USED gals.

Rig Service Time #

Auxiliary Equipment Time #

Fire Equipment Time #

Bank TO CBM

TO HR. USED CBM

Fuel Used Bank

Cement Returns (Yes/No)

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joint	2	3	4	TOTAL	Date Setback	Ft. Drilled since Setback	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1895 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

DRILL COLLARS

WEIGHT
VISCOSITY
GEL
W.L. F.C. pH
DESILTER Hours On: Hours Off:
CHEMICAL
SUPPLIES AT RIG
Weather
Water
Tanks

Drilling Line Record: Size Make Serial No. No. Lines Trips Ton Miles Total Miles Wear Slip & Cut Air Miles Date Slip & Cut Total Slip Air Cut on Slips

REMARKS

TIME: START STOP HRS

FIRES

DRILLER'S SIGNATURE

S.O.F. Tender Crewed Flag Pipe Hook Running & Spot Inspection Start

Rig Service Tick #
Kelly Cock Tick #
Pipe Racks Tick #

Fuel on Hand (U.S. g.a.l.)
Fuel Rec. (Today Load)
TOTAL
Fuel on Hand (U.S. g.a.l.)
FUEL USED

Fuel Used
Cement Returned

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tenderer

TOTAL RIG ON AT

Boiler Operator

DRILL PIPE Size Grade CLASSIFICATION 1 2 3 4 TOTAL Date Taken In Drilled Since Taken Total Ft. Drilled CALIPER DATE RESULTS FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1893 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1691 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME START FINISH

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Pipe Rams Blind Rams Kelly Cock Safety Valve Drill Pipe Safety Valve Casing Head & Bottom Flange Connections Check

Rig Service Time

Kelly Down Time

Rig Repairs Time

Fuel on Hand 12.01 a.m.

Fuel Rec. Today

TOTAL

Fuel on Hand 11.59 p.m.

FUEL USED

CEMENT RETURNS

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY FUEL

TOTAL CONTRACTOR'S FUEL

Approved by Operator's Representative

Approved by Toolpusher

NOTICE MINED ON 6-17-

Bit Number 24

DRILL PIPE Size Weight CLASSIFICATION 1 2 3 X TOTAL Pipe Setback At Drilled Total At Drilled CALIPER DATE RESULTS NEW FIRE RATE

CONSERVATION BOARD COPY

No 1893 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIMES START FINISH

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Pressure Test Held Packing & Seal Inspection Date

Fuel on Hand (2.01 p.m.)

Fuel Rec. & Today (add)

TOTAL

Fuel on Hand (11.59 p.m.)

FUEL USED

EQUIPMENT CHANGES

DATE FROM SHUB

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE Size Grade CLASSIFICATION 1 2 3 4 TOTAL Date Batch Ft. Drilled since Batch Total Ft. Drilled CALIPER DATE RESULTS FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1892 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1592 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

LOCATION

SEC. TWP. RGE. W. DATE

MILES MOVED

ROAD CONDITIONS

REMARKES

TIME START FINISH

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER TO

B.O.P.

TOTAL

FUEL USED

DATE FROM RIGS

TOTAL OPERATOR'S TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE

CLASSIFICATION

CALIPER DATE

CONSERVATION BOARD COPY

№ 1591 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIMES

FIRES

DRILLER SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1890 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1880 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

No 1888 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

DRILLING POINT

DISTANCE POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Tool pusher

CONSERVATION BOARD COPY

№ 1887 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS

WELL

RIG No.

LOCATION

SEC. TWP. RGE. W.

DATE

MAILING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

START

STOP

HRS.

FIRES

DRILLER'S SIGNATURE

EVENING

MIDNIGHT

B.O.P.

EQUIPMENT CHANGES

TOTAL

FUEL USED

DRILL PIPE

CLASSIFICATION

TOTAL

CALIPER DATE

RESULTS

FROM PIPE RACK

Approved by Operator's Representative

Approved by Toolpusher

HSW 2001-1

CONSERVATION BOARD COPY

No. 1556 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS

WELL

RIG NO.

LOCATION

LSD SEC TWP RGE W

DATE

MAILING POINT

SHIPPING POINT

TRUCK MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

DAYS FROM SPUD

FUEL USED

CONSERVATION BOARD COPY

No. 1885 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1881 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

FIRES

B.O.P.

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

CONSERVATION BOARD COPY

№ 1883 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1882 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION LOT SEC. TWP. RGE. W. DATE June 6 19

MAILING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

TOTAL

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE

CLASSIFICATION

CALIPER DATE

HOLES

FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1881 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REG. NO. 11-11 LOCATION CARLER MAY 4 LOT ___ SEC ___ TWP ___ RGE ___ W ___ DATE ___

DIRECTIONAL WELL ___ DRILLING FROM NORMAN NE DRILLING UNIT NO. 1 MILES MOVED ___ ROAD CONDITIONS ___

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Revolutions	Angle	Drill Collars	No.	O.D.	I.D.	Length	Wt. Per Foot	Total Wt.	O.D. of Bit Sub	Bit Sub Length
6274		6274	16		104	3								27	14

No.	Size	Type	Manufac.	Serial No.	Nozzle	S.P.M.	Pump Pressure	No.	Nozzle	No.	Nozzle	Pump Pressure	S.P.M.	Total Output	T	B	G
1																	
2																	
3																	

	12 mid.	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		6 p.m.	8 p.m.	10 p.m.	12 mid.		Total Hours of Change
WEIGHT															
VISCOSITY															
GEL															

W.L. ___ F.C. ___ pH ___ DESILTER Hours On 7 G. Flow 12 G. Flow ___ DESANDER ___ 1 2 3 4 5 6 7 8

REMARKS

	Start	Finish	Hours
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Drilling - 6274	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Drilling - 6274	[illegible]	[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE ___

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Revolutions	Angle	Drill Collars	No.	O.D.	I.D.	Length	Wt. Per Foot	Total Wt.	O.D. of Bit Sub	Bit Sub Length
6274	2	6276			104	4								27	

No.	Size	Type	Manufac.	Serial No.	Nozzle	S.P.M.	Pump Pressure	No.	Nozzle	No.	Nozzle	Pump Pressure	S.P.M.	Total Output	T	B	G
1																	
2																	
3																	

	12 mid.	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		6 p.m.	8 p.m.	10 p.m.	12 mid.		Total Hours of Change
WEIGHT															
VISCOSITY															
GEL															

W.L. ___ F.C. ___ pH ___ DESILTER Hours On ___ G. Flow ___ G. Flow ___ DESANDER ___ 1 2 3 4 5 6 7 8

FIRES ___ DRILLER'S SIGNATURE ___

From	Footage	To	Hrs. on Bottom	Wt. on Bit (1000 lbs.)	Revolutions	Angle	Drill Collars	No.	O.D.	I.D.	Length	Wt. Per Foot	Total Wt.	O.D. of Bit Sub	Bit Sub Length
6276	3	6281	1		104	4								27	

No.	Size	Type	Manufac.	Serial No.	Nozzle	S.P.M.	Pump Pressure	No.	Nozzle	No.	Nozzle	Pump Pressure	S.P.M.	Total Output	T	B	G
1																	
2																	
3																	

	12 mid.	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		6 p.m.	8 p.m.	10 p.m.	12 mid.		Total Hours of Change
WEIGHT															
VISCOSITY															
GEL															

W.L. ___ F.C. ___ pH ___ DESILTER Hours On 7 G. Flow 14 G. Flow 12 DESANDER ___ 1 2 3 4 5 6 7 8

FIRES ___ DRILLER'S SIGNATURE ___

B.O.P.	Tested	Closed Time	Pres. Lock	Pressure & Bolt Inspection Date	Kelly Cock Chk. #	Fuel on Hand 7:00 a.m.	gals.				
Model					Kelly Cock Chk. #	Fuel Rec. (Tanks)	gals.				
Pipe Rams					Kelly Cock Chk. #	Fuel Rec. (Tanks)	gals.	TOTAL	gals.		
Blind Rams					Kelly Cock Chk. #	Fuel Used 11:00 p.m. (Tanks)	gals.				
TESTED AGAINST BIT #		Spud Date	24	Hrs.	Fire Equip. Chk. #	FUEL USED	gals.	CONDITIONS RETURNED			

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Ft. Drilled (Total Footage)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM TYPE RACK

EQUIPMENT CHANGES ___ DRILLER'S SIGNATURE ___ TRANSFER #

DAYS FROM SPUD 124

TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

Approved by Operator's Representative ___

Approved by Toolpusher ___

CONSERVATION BOARD COPY

№ 1880 HSW

POOR COPY

MATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

CONSERVATION BOARD COPY

№ 1579 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1878 PSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

LOCATION

LAT. SEC. TWP. RGE. W. DATE

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

TOTAL

FUEL USED

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE

CLASSIFICATION

TOTAL

CALIPER DATE

CONSERVATION BOARD COPY

№ 1877 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

DRILLER'S SIGNATURE

DRILLER'S SIGNATURE

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

CONSERVATION BOARD COPY

№ 1876 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT EXISTING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Serial	CLASSIFICATION 2	3	4	TOTAL	Date Serviced	Ft. Drilled since Serviced	Same as Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1876 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1875 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG 41-11 LOCATION CAMUS M 43-4 LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE May 20 1971

DIRECTIONS TO WELL Left 62 miles to Highway 18 & 37 ... 1 ... 7 MAILING POINT Norman Wells SHIPPING POINT

MILES MOVED ___ ROAD CONDITIONS ___

From	Footage	To	No. of Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.B.H.	No. of Joints Fairly
5774	39	5786	6½		77	4							27	9

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hrs.	No.	Removed	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	200	104	174			2	250	[illegible]	[illegible]			
S																	

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		2 m.	4 a.m.	6 a.m.		Hours for Change
WEIGHT	9.1	9.1	9.1	9.0	No. 1	Cut	[illegible]			No. 2				1	
VISCOSITY	46	46	46	45	MUD	Tank				MUD				2	
GEL														3	
W.L.		F.C.	pH 8	DRILLER Mario Ch. 8		Q. Flow		Q. Flow		SUPPLIES At Rig	Delivered			4	
ADDITIVES					GENERAL									5	
														Gasoline	Water
														Tanks	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip to Cut	At Miles	Slip to Cut	Slip to Cut	At Miles	Hours Drilling Line	Hours Slip to Cut	No. Left on Spool

From	Footage	To	No. of Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.B.H.	No. of Joints Fairly
5786	34	5820	3½		77	2							27	16

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hrs.	No.	Removed	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	200	133	214			2	250	[illegible]	[illegible]			
S																	

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	Hours for Change
WEIGHT				9.1	No. 1	Cut	[illegible]			No. 2				1	
VISCOSITY				46	MUD	Tank				MUD				2	
GEL														3	
W.L.		F.C.	pH 9	DRILLER Mario Ch. 8		Q. Flow	1.4	Q. Flow	1.0	SUPPLIES At Rig	Delivered			4	
ADDITIVES	Chrome Salt				GENERAL	1565 [illegible]								5	
	5500 Gentrol					[illegible]								Gasoline	Water
	2400 [illegible]					[illegible]								Tanks	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip to Cut	At Miles	Slip to Cut	Slip to Cut	At Miles	Hours Drilling Line	Hours Slip to Cut	No. Left on Spool

From	Footage	To	No. of Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub Wt.	C.B.H.	No. of Joints Fairly
5820					77	2							27	16

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hrs.	No.	Removed	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		133	214									
S																	

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	Hours for Change
WEIGHT				9.1	No. 1	Cut				No. 2				1	
VISCOSITY				47	MUD	Tank				MUD				2	
GEL														3	
W.L.		F.C.	pH 9	DRILLER Mario Ch. 8		Q. Flow		Q. Flow		SUPPLIES At Rig	Delivered			4	
ADDITIVES					GENERAL									5	
														Gasoline	Water
														Tanks	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip to Cut	At Miles	Slip to Cut	Slip to Cut	At Miles	Hours Drilling Line	Hours Slip to Cut	No. Left on Spool

B.O.P.	Tested	Expired Test	Rig Load	Packing & Seal Inspection Rpts.
Model				
Pipe Rams				
Blind Rams				

Rig Service Chk. #	
Kelly Cock Chk. #	
Kelly Bushing Chk. #	

Fuel on Hand (2.0 p.m.)	gals.
Fuel Rec'd Today (add)	gals.
TOTAL	gals.
Fuel on Hand (11.00 p.m. Inventory)	gals.
FUEL USED	gals.

	Gain	Loss	Cum
Mud			
Pits			
Total			

MUD			
PITS			
CEMENT RETURNS			

Bags Used	
Bags Left	
Pump Strokes	A.M. P.M.

DAYS FROM SPUD	118
TOTAL COMPANY TIME	HRS
TOTAL CONTRACTOR'S TIME	HRS

EQUIPMENT CHANGES — DRILLER'S SIGNATURE — TRANSFER #

BITS USED ON BIT #	Barrels Cleaned	Hrs.
	2	4

DRILL PIPE	Size	Grade	CLASSIFICATION 2	1	4	TOTAL	Date Series	Ft. Drilled since Series	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

Approved by Operator's Representative

Approved by Tangier

HSW-3001-1 CONSERVATION BOARD COPY

№ 1871 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG No. 11-11 LOCATION CARDON M 43-4 LSD SEC TWP RGE W DATE May 10 1971

DIRECTIONS TO WELL: [illegible] MAILING POINT: NORMAN WELLS SHIPPING POINT: WILER MOVED: ROAD CONDITIONS:

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B. Pt.	Pt. Loads Below
5919	39	5956	6½		79	4		[illegible]						27	9

Bit No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hours at Change	No.	Nozzles	No.	Size	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	260	104	174			2	250	[illegible]	[illegible]			

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.	Hours for Change
WEIGHT	9.1	9.1	9.1	9.0	No. 1	Cat.				No. 2					1
VISCOSITY	45	46	46	43	MODEL	Fan				MODEL					2
GEL															3
W.L.	F.C.	pH 8	DESILTER: Hours On 8		C. Flow 1.1		C. Flow 1.1		SAFETY: Last Test						4
ADDITIVES:					OR ADDS:										5
														Weather	Water
														Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Run Miles	Total Miles	Wear: Slip & Cut	At Miles	Wear: Slip & Cut	Wear: Drum	At Left on Spool

REMARKS

	START	STOP	TOTAL
Rig Sick	[illegible]	[illegible]	[illegible]
Drilling 5924	[illegible]	[illegible]	[illegible]
Rig Sick	[illegible]	[illegible]	[illegible]
Drilling 5956	[illegible]	[illegible]	8

FIRES

DRILLER'S SIGNATURE

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B. Pt.	Pt. Loads Below
5956	24	5980	3½		79	2		[illegible]						27	16

Bit No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hours at Change	No.	Nozzles	No.	Size	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	260	153	318			2	250					

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	Hours for Change
WEIGHT				9.1	No. 1	Cat.				No. 2					1
VISCOSITY				43	MODEL	Fan				MODEL					2
GEL															3
W.L.	F.C.	pH 9	DESILTER: Hours On 8		C. Flow 1.1		C. Flow 1.0		SAFETY: Last Test						4
ADDITIVES: Cedar Salt					ADDS: 1500 lbs Bentonite										5
2500 Gel Tank					Daily Mud Analysis									Weather	Water
2000 Lignosite 101					Well Circulated Overnight									Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Run Miles	Total Miles	Wear: Slip & Cut	At Miles	Wear: Slip & Cut	Wear: Drum	At Left on Spool

REMARKS

	START	STOP	TOTAL
Drilling -	[illegible]	[illegible]	[illegible]
RAC Tank	[illegible]	[illegible]	[illegible]

FIRES

DRILLER'S SIGNATURE

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Acc. Wt.	Sub. Wt.	C.B. Pt.	Pt. Loads Below
5980					79	2		[illegible]						27	16

Bit No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hours at Change	No.	Nozzles	No.	Size	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	318									

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	Hours for Change
WEIGHT				9.1	No. 1	Cat.				No. 2					1
VISCOSITY				43	MODEL	Fan				MODEL					2
GEL															3
W.L.	F.C.	pH 9	DESILTER: Hours On 8		C. Flow		C. Flow		SAFETY: Last Test						4
ADDITIVES:					ADDS:										5
														Weather	Water
														Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Run Miles	Total Miles	Wear: Slip & Cut	At Miles	Wear: Slip & Cut	Wear: Drum	At Left on Spool

REMARKS

	START	STOP	TOTAL
Rig Sick	[illegible]	[illegible]	[illegible]
Time out [illegible]	[illegible]	[illegible]	[illegible]
Normal Drilling	8.00		
Rig at [illegible]			
[illegible]			
[illegible]		12.00	[illegible]
[illegible]			

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Pressure Test	Pipe Leak	Pipe Rams	Blind Rams	Inspection Date	Kelly Cock Size & Type	Kelly Cock Test	Kelly Cock Size & Type	Kelly Cock Test	Fire Fighting Equipment Size & Type	Fire Fighting Equipment Test

Fuel on Hand (2.01 a.m.)	gals.		MAN	TR	CRG
Fuel Rec. Today (gals)	gals.				
TOTAL	gals.	TO	FR USED	SAV	CON.
Fuel on Hand 11.00 p.m. (gals.)	gals.	FLOW		FLUID DENSITY	P.H.
FUEL USED	gals.	CASING RETURNS	TBG. / MCI		

EQUIPMENT CHANGES

TRANSFER IN

DAYS FROM SPUD 118

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

NOTICE WIRE ON AT @ Rotary Clearance 2 4 Hrs.

DRILL PIPE	Size	Grade	CLASSIFICATION 2	1	0	TOTAL	Date Sent	Ft. Scribed (Total Sent)	Total Ft. Scribed	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1871 HSW

POOR COPY

HEATH & SHERWOOD DRILLING | WESTERN

DAILY DRILLING LOG

DIRECTIONS: [illegible]

WELL: [illegible]

RIG NO. [illegible] LOCATION [illegible] SEC. ___ TWP. ___ RGE. ___ W. ___ DATE [illegible]

RIG MOVE POINT: [illegible] SHERWOOD POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

REMARKS

	START	FINISH	HRS
Trip out	6:00	1:45	1½
Change bit	1:45	2:00	¼
Trip in	2:00	4:00	2
Wash [illegible]	4:00	5:00	1
Drilling	5:00	8:00	3

FIRES ___ DRILLER'S SIGNATURE ___

Drilling - 5787	8:00	[illegible]	[illegible]
Rig [illegible]	[illegible]	9:00	1½
Drilling - 5827	11:00	2:00	3
Rig [illegible]	2:00	3:00	½
Drilling	3:00	4:00	½
[illegible]	[illegible]	[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE ___

Rig [illegible]	4:00	[illegible]	[illegible]
Drilling - 5914	4:00	5:00	1½
Rig [illegible]	5:00	6:00	1½
Drilling - 5942	6:00	7:00	½
Rig [illegible]	7:00	8:30	1½
Drilling - 5944	8:30	9:30	1
Rig [illegible]	9:30	10:30	1
Drilling - 5944	10:30	11:00	½
Rig [illegible]	11:00	12:00	1

FIRES ___ DRILLER'S SIGNATURE ___

Drilling - 5944	12:00	1:00	1
Rig [illegible]	1:00	2:00	1
Drilling - 5944	2:00	3:00	1
Rig [illegible]	3:00	4:00	1
Drilling - 5944	4:00	5:00	1
Rig [illegible]	5:00	6:00	1
Drilling - 5944	6:00	7:00	1
Rig [illegible]	7:00	8:00	1
Drilling - 5944	8:00	9:00	1
Rig [illegible]	9:00	10:00	1
Drilling - 5944	10:00	11:00	1
Rig [illegible]	11:00	12:00	1

FIRES ___ DRILLER'S SIGNATURE ___

EQUIPMENT CHANGES ___ TRANSFER #

DATE FROM SPUD: 127

TOTAL COMPANY FUEL ___ HRS. TOTAL CONTRACTOR'S FUEL ___ HRS.

Approved by Operator's Representative ___

Approved by Toolpusher ___

CONSERVATION BOARD COPY

№ 1573 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG No. 11-11 LOCATION Cowden Ranch DATE May 28

DIRECTIONS TO WELL

MAILING POINT Norman Okla.

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD 116

CONSERVATION BOARD COPY

№ 1572 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CANADA REALM LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE May 27 19 __

DIRECTIONS TO WELL EAT 6 1/2 miles off highway 36 1/2 MAILING POINT Nanton Alta. SHIPPING POINT

MOVED FROM ___ ROAD CONDITIONS ___

Time	Footage	To	Wt. on Bottom	Strokes	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Bottom
5685	35	5720	56	95									27	12

Pump No.	Size	Type	Make/Model	Serial No.	Wgt.	S.P.M.	Pump Output Gal/Stk	No.	Nozzles	Jet	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
1	6	[illegible]	36-S	[illegible]	[illegible]	[illegible]	6.3	[illegible]			[illegible]		[illegible]			
2																

	12 m.	3 a.m.	6 a.m.	9 a.m.		12 m.	3 p.m.	6 p.m.	9 p.m.		12 m.	3 a.m.	6 a.m.	9 a.m.	Hours Not Drilling
Weight	[illegible]	[illegible]	[illegible]	[illegible]	Mud Pump No. 1 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	Mud Pump No. 2 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	1
Viscosity	[illegible]	[illegible]	[illegible]	[illegible]	Model	[illegible]	[illegible]	[illegible]	[illegible]	Model	[illegible]	[illegible]	[illegible]	[illegible]	2
Gel	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	3
W.L.	F.C.	pH	Desilter Make Cap.		G. Flow		D. Flow			Shakers					4
															5
															6
															7
															8
															Weather / Temp.

Remarks: Rig up & R.C. Cons. Drilling 5685 to 5720 R.C. Cons. Drilling 5720 to 5720

Driving Line Record: Size | Make | Serial No. | Cut Off | Trips | Ton Miles | Total Miles | Slip & Cut | Air Miles | Date Slip & Cut | Hours Drlg. | Ft. Left on Spool

Time	Footage	To	Wt. on Bottom	Strokes	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Bottom
5720	35	5755	33	75	4		4	[illegible]					27	3

Pump No.	Size	Type	Make/Model	Serial No.	Wgt.	S.P.M.	Pump Output Gal/Stk	No.	Nozzles	Jet	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
1	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.6	[illegible]			[illegible]		[illegible]			
2																

	6 a.m.	10 a.m.	12 noon	3 p.m.		6 p.m.	10 p.m.	12 mid.	3 a.m.		6 a.m.	10 a.m.	12 noon	3 p.m.	Hours Not Drilling
Weight	2	90	4	90	Mud Pump No. 1 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	Mud Pump No. 2 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	1
Viscosity	[illegible]	[illegible]	[illegible]	47	Model	[illegible]	[illegible]	[illegible]	[illegible]	Model	[illegible]	[illegible]	[illegible]	[illegible]	2
Gel	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	3
W.L.	F.C.	pH	Desilter Make Cap.		G. Flow	92	D. Flow	70		Shakers					4
															5
															6
															7
															8
															Weather / Temp.

Remarks: Drilling 5720 to 5755 R.C. Cons. Drilling 5755 to 5771 R.C. Cons. Drilling 5771 to 5771 R.C. Cons. Drilling 5771 to 5771 R.C. Cons.

Driving Line Record: Size | Make | Serial No. | Cut Off | Trips | Ton Miles | Total Miles | Slip & Cut | Air Miles | Date Slip & Cut | Hours Drlg. | Ft. Left on Spool

Time	Footage	To	Wt. on Bottom	Strokes	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Bottom
5755	22	5771	34	96										

Pump No.	Size	Type	Make/Model	Serial No.	Wgt.	S.P.M.	Pump Output Gal/Stk	No.	Nozzles	Jet	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]		[illegible]			
2																

	6 a.m.	9 a.m.	12 noon	3 p.m.		6 p.m.	9 p.m.	12 mid.	3 a.m.		6 a.m.	9 a.m.	12 noon	3 p.m.	Hours Not Drilling
Weight				9	Mud Pump No. 1 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	Mud Pump No. 2 Liners / Strokes	[illegible]	[illegible]	[illegible]	[illegible]	1
Viscosity				47	Model	[illegible]	[illegible]	[illegible]	[illegible]	Model	[illegible]	[illegible]	[illegible]	[illegible]	2
Gel						[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	3
W.L.	F.C.	pH	Desilter Make Cap.		G. Flow		D. Flow			Shakers					4
															5
															6
															7
															8
															Weather / Temp.

Remarks: Rig S&R R.C. Cons. Drilling 5772 R.C. Cons. Drilling 5772 R.C. Cons. Drilling 5772 R.C. Cons. Drilling 5771 R.C. Cons.

Driving Line Record: Size | Make | Serial No. | Cut Off | Trips | Ton Miles | Total Miles | Slip & Cut | Air Miles | Date Slip & Cut | Hours Drlg. | Ft. Left on Spool

B.O.P.	Tested	Blowout Drlg.	Rig Long	Packing & Seal Replacing Date
Model				
Pipe Rams				
Blind Rams				

TESTED RING ON KIT Ø ___ Motor Operated 24 Hrs.

Equipment Check Ø: Kelly Cock Ø ___ Kelly Saver Sub Ø ___ Kelly Cock Ø ___ Kelly Flexible Ø ___

Fuel on Hand (12:01 a.m.) ___ gals. Fuel Rec. & Taken (Add) ___ gals. TOTAL ___ gals. Fuel on Hand (11:59 p.m. Calculated) ___ gals. FUEL USED ___ gals.

	BBL	FT	FWB
TO	YR. USED	SAV	CSN
PLUG	PLUG DEPTH	A.M. P.M.	
CHANGE RETURNS YES/NO			

Equipment Changes: Rig Repairing

Transfer Ø ___

Date Mon. Spud 1-15

Total Operation Time ___ HRS. Total Contractor's Time ___ HRS.

Approved by Operator's Representative: [illegible]

Approved by Toolpusher: C. Nelson

Drill Pipe	Size	Grade	Classification 2	3	4	Hours	Bore Gauge	Ft. Drilled (Since Gauge)	Total Ft. Drilled	Caliper Date	Results	From Pipe Rack

CONSERVATION BOARD COPY

№ 1871 HSW

POOR COPY

NEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION LSD SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

S.O.P.

EQUIPMENT CHANGES

DATE FROM WORK

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE

CALIPER DATE

RESULTS

FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1870 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 1141 LOCATION Cape Mesa DATE May 25 19[illegible]

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT MILES MOVED ROAD CONDITIONS

From	Footage	To	No. on Bottom	Stands	Singles	C.B. Ft.	Ft. up on Kelly
5502	9	5511	12	72	4	27	8
5591	15	5606	32	72	1	27	14
5606	16	5622	34	73	2	27	14

REMARKS	Start	Stop	Hours
Rig Serv.	12:00	12:15	1/4
[illegible]	12:15	5:00	4 3/4
[illegible]	5:00	5:15	1/4
Drilling 5511	5:15	8:00	2 3/4
FIRES			
Rig Serv.	8:00	8:15	1/4
Drilling - 5600	8:15	10:00	1 3/4
Rec core [illegible]	10:00	11:30	1 1/2
Drilling - 5606	11:30	1:00	1 1/2
Rec core	1:00	2:00	1
Change [illegible]	[illegible]	[illegible]	1 1/2
Circulate	[illegible]	3:45	1/4
Drilling - 5605	3:45	4:00	1/4
FIRES			
Rig Serv.	4:00	4:15	1/4
Rec core	4:15	5:00	3/4
Drilling ([illegible])	5:00	5:15	1/4
[illegible]	[illegible]	[illegible]	1/2
[illegible] at 5617 [illegible]	5:00	7:00	1 1/2
Drilling 5620	7:00	7:45	3/4
Rec core	7:45	8:30	3/4
[illegible]	8:30	11:45	[illegible]
Drilling - 5622	11:45	12:00	1/4
FIRES			

DRILLER'S SIGNATURE

DAYS FROM SPUD 112

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1869 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

FUEL USED

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1868 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 171 LOCATION LSD SEC TWP RGE W DATE May 27 1971

DIRECTIONS TO WELL DRILLING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START / STOP / HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

B.O.P. Tested Equipment Tally Pick Up Kelly & Bell Inspection Date

Check in Month Chk #

Rig Repairs Chk #

Misc. Costs Chk #

Misc. Rent. Chk #

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR TIME

Approved by Operator's Representative

Approved by Toolpusher

BOILER CLASSIFICATION

DRILL PIPE	Size	Grade	2	3	4	TOTAL	Date Delivered	Ft. Drilled (Grade Number)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1867 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL CO.

WELL

RIG NO.

LOCATION

LOT SEC TWP RGE W

DATE May 22 1971

MAILING ADDRESS

SUPERVISOR

MILES MOVED

ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

FUEL USED

DRILL PIPE

CLASSIFICATION

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1586 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

CONSERVATION BOARD COPY

Nº 1864 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS WELL

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

FUEL USED

DATE FROM MUD

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1864 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11 LOCATION Cardi[illegible] LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE Mar[illegible] 19[illegible]

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

Tour	From	Footage	To	Hrs. on Bottom	Stands	Singles	C & H	Hrs.
1	5376	17½	5393½	3¾	89	2	27	17½
2	5393½	13½	5407	2½	89	[illegible]		14
3	5407	23	5430	5½	90	1	27	11

REMARKS

Remarks	Start	Stop	Hrs.
[illegible]	12	12	¼
Rig Serv	12	12	¼
[illegible]	[illegible]	1	½
[illegible]	[illegible]	[illegible]	½
[illegible]	[illegible]	[illegible]	1
[illegible]	[illegible]	[illegible]	2¾
[illegible]	[illegible]	[illegible]	½
[illegible]	5	6	1
[illegible]	6	7	[illegible]
FIRES	7	[illegible]	½
Rig Serv	8	8	¼
[illegible]	[illegible]	[illegible]	¾
[illegible]	[illegible]	[illegible]	1
[illegible]	[illegible]	[illegible]	1¼
[illegible]	[illegible]	[illegible]	1
[illegible]	[illegible]	1	1¾
[illegible]	[illegible]	[illegible]	½
[illegible]	[illegible]	2	½
[illegible]	[illegible]	[illegible]	½
[illegible]	[illegible]	[illegible]	½
FIRES			
Drilling	[illegible]	[illegible]	¼
[illegible]	[illegible]	[illegible]	1
Drilling [illegible]	[illegible]	[illegible]	2¼
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	½
[illegible]	[illegible]	[illegible]	1

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD 108

Approved by Operator's Representative

Approved by Toolpusher

№ 1863 HSW

CONSERVATION BOARD COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

CONSERVATION BOARD COPY

№ 1862 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11 LOCATION Cable & Maple LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE May 17 1971

DIRECTIONS TO WELL 2 mi. W. of Stavely on Hwy 529 (Lot 7) MAILING POINT Nordegg EQUIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	T.B.R.	Ft. up on Racks
5370					99	1								27	16

Bit No.	Size	Type	Jets/W.O.	Serial No.	Wgt.	R.P.M.	Hours in Ground	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Liner Diameter	T	B	G
10	7 7/8	HTC	20-20-20	6011			128	40			2	120	100				

	12 m.	2 a.m.	4 a.m.	6 a.m.	Pump No. 1	12 m.	2 a.m.	4 a.m.	6 a.m.	Pump No. 2	12 m.	2 a.m.	4 a.m.	6 a.m.	Mud Additives	Hours on Pump
WEIGHT			72	72												
VISCOSITY			37	37												
GEL																

W.L. ___ F.C. ___ pH ___ DESILTER Hours On 8 U. Flow ___ O. Flow ___ SURVEYS Depth Degrees

REMARKS: 2-1/2" Stand Rods Out (Lighted)

GENERAL: ___

Weather ___ Temp. ___ Water ___ Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Footage Slip to Cut	Air Miles	Hours Slip to Cut	Hours Trip	Ft. Left on Spool

REMARKS

	Start	Stop	Hrs.
[illegible]	12:00	12:[illegible]	[illegible]
Tripping [illegible]	12:[illegible]	1:[illegible]	[illegible]
[illegible]	1:[illegible]	1:[illegible]	[illegible]
[illegible]	1:[illegible]	2:[illegible]	[illegible]
Mud [illegible]	2:[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE ___

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	T.B.R.	Ft. up on Racks
5370	6	5376	24		99	2								27	22

Bit No.	Size	Type	Jets/W.O.	Serial No.	Wgt.	R.P.M.	Hours in Ground	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Liner Diameter	T	B	G
11	7 7/8	HTC	20-20-20	6011	15M	140	128	24			2	120	100				

	8 a.m.	10 a.m.	12 noon	2 p.m.	Pump No. 1	8 a.m.	10 a.m.	12 noon	2 p.m.	Pump No. 2	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Additives	Hours on Pump
WEIGHT		74		70			120				260	260		120		
VISCOSITY		39		37			39				240	260				
GEL																

W.L. ___ F.C. ___ pH ___ DESILTER Hours On 24 U. Flow 84 O. Flow 74 SURVEYS Depth Degrees

REMARKS: 12 Bags SAF; 2 Barrels Fuel oil; 1 Barrel Gasoil

GENERAL: ___

Weather ___ Temp. ___ Water ___ Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Footage Slip to Cut	Air Miles	Hours Slip to Cut	Hours Trip	Ft. Left on Spool

REMARKS

	Start	Stop	Hrs.
[illegible]	8:[illegible]	8:[illegible]	[illegible]
[illegible]	8:[illegible]	10:[illegible]	[illegible]
Drill Hole 5370	10:[illegible]	12:[illegible]	[illegible]
R.C. Core	12:[illegible]	1:[illegible]	[illegible]
Working 5376	1:[illegible]	2:[illegible]	[illegible]
[illegible]	2:[illegible]	4:[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE ___

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	T.B.R.	Ft. up on Racks
5376															

Bit No.	Size	Type	Jets/W.O.	Serial No.	Wgt.	R.P.M.	Hours in Ground	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Liner Diameter	T	B	G
12	7 7/8	HTC	20-20-20	6011													

	4 a.m.	6 a.m.	8 a.m.	10 a.m.	Pump No. 1	4 a.m.	6 a.m.	8 a.m.	10 a.m.	Pump No. 2	4 a.m.	6 a.m.	8 a.m.	10 a.m.	Mud Additives	Hours on Pump
WEIGHT	72															
VISCOSITY	37															
GEL																

W.L. ___ F.C. ___ pH 9 DESILTER Hours On 8 U. Flow 66 O. Flow 71 SURVEYS Depth Degrees

REMARKS: 2-1/2" Stand Rods Out (Lighted)

GENERAL: ___

Weather ___ Temp. ___ Water ___ Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Footage Slip to Cut	Air Miles	Hours Slip to Cut	Hours Trip	Ft. Left on Spool

REMARKS

	Start	Stop	Hrs.
Rig Sick	4:[illegible]	4:[illegible]	[illegible]
Circulate Tank out sick	4:[illegible]	5:15	1
Tripping out	5:[illegible]	7:30	2½
[illegible]	7:30	9:00	1½
[illegible]	9:[illegible]	11:[illegible]	2½
[illegible]	11:[illegible]	12:00	[illegible]

FIRES ___ DRILLER'S SIGNATURE ___

B.O.P.	Tested	Opened Rams	Pipe Rams	Packing & Seat Inspected Daily
Model				
Pipe Rams				
Blind Rams				

Casing & Shoe Chk. ___ Rig Servicing Chk. ___ Kelly Cock Chk. ___ Fire Equip. Chk. ___

Fuel on Hand (2.01 a.m.) ___ Fuel Rec. (Today Total) ___ TOTAL ___ Fuel on Hand (11:59 p.m.) ___ FUEL USED ___

RAN: ___ JTS ___ CSG. ___ TO ___ FR. USED ___ SAX ___ CEM. ___ PLUG DOWN ___ A.M. P.M. CEMENT RETURNS (YES-NO) ___

EQUIPMENT CHANGES ___ TRANSFER # ___

DATE FROM MIDN. 107 TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

TOTCO RING ON BIT # ___ Bottom Overview 24 Hrs.

DRILL PIPE	Size	Joint	CHARACTERIZATION 2	3	4	TOTAL	Date Setting	Ht. Bottom (Joint Number)	Total Ht. Bottom	CALIPER DATE	RESULTS	HIGH-FIRE RACK

Approved by Operator's Representative ___ Approved by Toolpusher ___

CONSERVATION BOARD COPY

№ 1862 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL

RIG NO. 11-41 LOCATION Cross Mtn. Drawing LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE May 18 19 71

MAILING POINT Norman Wells SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.G. Ft.	Ft. up on Kelly
5336	11	5347	7½		88	4							27	16

Bit No.	Size	Type	Serial No.	Nozzles	Depth In	Footage	Hrs.	Condition	Pump No.	Pump Pressure	R.P.M.	Pump Strokes	T.	L.	W.
11	8½	[illegible]	[illegible]	[illegible]	5309	138	15½	7/8	2	900	200	[illegible]			

	12 m.	2 a.m.	4 a.m.	6 a.m.	MUD	12 m.	2 a.m.	4 a.m.	6 a.m.	MUD	12 m.	2 a.m.	4 a.m.	6 a.m.	Mud Add Change
WEIGHT			9.2		No. 1	[illegible]	[illegible]	[illegible]		No. 2	10.3			10.0	1
VISCOSITY			140		Model					Model	[illegible]			[illegible]	2
GEL								2			1				3

W.L. ___ F.C. ___ pH 9 DESILTER: Hours Op. 8 U. Flow 9.5 O. Flow 11 SURVEYS Kind ___ Degrees ___ 4 5

Remarks: Ran 10 jts Csg. Cmt. Csg. Drill 22 Days Drill. Ft. Days Drill. Ft. Days Drill. Ft. Cut Core Barrel 5340 Core Barrel

Weather ___ Water ___ Temp. ___ Bbls.

Drilling Line Reeved	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Date Slip or Cut	Hours Slip	Ft. Left on Reel

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.G. Ft.	Ft. up on Kelly
5341	21	5368	5½		89	1							27	21

Bit No.	Size	Type	Serial No.	Nozzles	Depth In	Footage	Hrs.	Condition	Pump No.	Pump Pressure	R.P.M.	Pump Strokes	T.	L.	W.
12	8½	[illegible]	[illegible]	[illegible]	5309	59	17½	3/8	2	1000	80	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Add Change
WEIGHT	9.1		9.1		No. 1	Gelchem				No. 2	10.3				1
VISCOSITY	44	48	40	47	Model		Kaiser			Model	140				2
GEL								2			1				3

W.L. ___ F.C. ___ pH 9 DESILTER: Hours Op. 8 U. Flow 11 O. Flow 11 SURVEYS Kind ___ Degrees ___ 4 5

Remarks: General

Weather ___ Water ___ Temp. ___ Bbls.

Drilling Line Reeved	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Date Slip or Cut	Hours Slip	Ft. Left on Reel

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.G. Ft.	Ft. up on Kelly
5368	2	5370	6											

Bit No.	Size	Type	Serial No.	Nozzles	Depth In	Footage	Hrs.	Condition	Pump No.	Pump Pressure	R.P.M.	Pump Strokes	T.	L.	W.
13	[illegible]	[illegible]	[illegible]	[illegible]	5368	2	6								

	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Mud Add Change
WEIGHT	[illegible]	9.5		11	No. 1					No. 2					1
VISCOSITY		46		46	Model					Model					2
GEL															3

W.L. ___ F.C. ___ pH 9.5 DESILTER: Hours Op. 8 U. Flow 9.8 O. Flow 10 SURVEYS Kind ___ Degrees ___ 4 5

Remarks: Continuing Core

Weather ___ Water ___ Temp. ___ Bbls.

Drilling Line Reeved	Size	Make	Serial No.	No. Lines	Trips	Total Miles	Total Miles	Wear Slip	Wear Cut	Air Miles	Date Slip or Cut	Hours Slip	Ft. Left on Reel

REMARKS	TIME START	TIME END	TIME HRS.
Circ. & Wash Pipe [illegible]	12 00	2 00	2
Drilling - 5324	2 00	3 00	1
R.C. Core	3 00	4 00	1
Drilling - 5341	4 00	5 00	1
R.C. Core	5 00	6 00	1
Surveys & Trips	6 00	6 30	1/2
Drilling	6 30	8 00	1½
FIRES		DRILLER'S SIGNATURE	
R.C. Core	8 00	8 30	1/2
Drilling	8 30	12 00	3½
R.C. Core	12 00	1 00	1
Repair [illegible]	1 00	1 30	1/2
Drilling 5368	1 30	2 30	1
R.C. Core	2 30	4 00	1½
Drilling - 5369	4 00	4 30	1/2
FIRES		DRILLER'S SIGNATURE	
Drilling - 5370	4 00	4 30	1/2
R.C. Core	4 30	5 00	1/2
Drilling 5370 (Stopped)	5 00	5 30	1/2
[illegible]	5 30	6 00	1/2
Trip out of T	6 00	7 00	1
Inspected [illegible]	7 00	7 30	1/2
Trip in [illegible]	7 30	9 00	1½
Circ. & [illegible]	9 00	10 30	1½
Circ. & [illegible]	10 30	11 00	1/2
Trip out	11 00	12 00	1
FIRES		DRILLER'S SIGNATURE	

B.O.P.	Tested	Pressure Test	Pressure	Hydrilling & Spare Inspection Stamp
Model				
Pipe Rams	K	3	1000	
Blind Rams	K	3	1000	

Circulating Hours Old		
Big Seven Old	6	
Rocky Core Old	6	
Fine Figure Old		
FUEL USED		

Fuel on Hand 12:01 a.m.	gals.	
Fuel Rec. d Today (gals)	gals.	
TOTAL	gals.	
Fuel on Hand 11:59 p.m. (exclusive)	gals.	
FUEL USED	gals.	

	GAS	CON
NO	KB USED	GAS CON
FUEL		FUEL DOWN
CONSAT RETURNS (YES/NO)		

	GAS	CON

EQUIPMENT CHANGES ___ TRANSFER #

DATE FROM SPUD 106

TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

Approved by Operator's Representative [signature]

Approved by Toolpusher [signature]

TOTED BING ON BIT # ___ Bottom Operated 24 Hrs.

DRILL PIPE	Size	Wall	CLASSIFICATION 2	3	4	TOTAL	Date Taken	Ft. Drilled (since Taken)	Tested Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

HSW 202-1 CONSERVATION BOARD COPY

№ 1861 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO: WELL:

RIG NO. LOCATION LAD SEC TWP RGE W DATE MAY 17 1971

DRILLING POINT SHIPPING POINT MOVED FROM ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Hrs. Bit Was Idle (1000 hrs.)	Bit No.	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Hrs.	Tot. Hrs.	Hrs. on Job
5281	18	5299	24		27								27	19

No.	Make	Type	Serial No.	Size	Weight	R.P.M.	Hours on Bottom	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Total Pump Strokes	T.	B.	Dr.
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	107	21			1	[illegible]		[illegible]			
2																	
3																	

	12 noon	2 p.m.	4 p.m.	6 p.m.		10 a.m.	12 noon	2 p.m.	4 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Mud Pump Strokes
WEIGHT			[illegible]	[illegible]	No. 1	[illegible]				No. 2					1	
VISCOSITY			[illegible]	[illegible]	MODEL	[illegible]				MODEL					2	
OIL						[illegible]									3	
W.L.	F.C.	pH			DESILTER Make Qty.			Q. Flow		Q. Flow					4	
CHEMICALS					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Rope Size	No. Cut	Air Miles	Hours Work on Cut	Hours Drlg.	Ft. Left on Spool

REMARKS

	TIME START	TIME STOP	HRS.
[illegible]	12 [illegible]	12 [illegible]	[illegible]
[illegible]	12 [illegible]	2 [illegible]	[illegible]
[illegible]	12 [illegible]	2 [illegible]	2 [illegible]
[illegible]	2 [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	6 [illegible]	2 [illegible]
[illegible]	6 [illegible]	7 [illegible]	[illegible]
[illegible]	7 [illegible]	[illegible]	[illegible]

FIRES DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Hrs. Bit Was Idle (1000 hrs.)	Bit No.	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Hrs.	Tot. Hrs.	Hrs. on Job
5299	28	5327	6		27	3							18	19

No.	Make	Type	Serial No.	Size	Weight	R.P.M.	Hours on Bottom	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Total Pump Strokes	T.	B.	Dr.
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	125	[illegible]			1	[illegible]	[illegible]	[illegible]			
2																	
3																	

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Mud Pump Strokes
WEIGHT	8.9				No. 1	[illegible]				No. 2					1	
VISCOSITY	27			27	MODEL	[illegible]				MODEL					2	
OIL						[illegible]									3	
W.L.	F.C.	pH 9			DESILTER Make Qty.			Q. Flow		Q. Flow					4	
CHEMICALS					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Rope Size	No. Cut	Air Miles	Hours Work on Cut	Hours Drlg.	Ft. Left on Spool

REMARKS

	TIME START	TIME STOP	HRS.
[illegible]	8 [illegible]	8 [illegible]	[illegible]
[illegible]	8 [illegible]	10 [illegible]	2 [illegible]
[illegible]	10 [illegible]	11 [illegible]	1 [illegible]
[illegible]	11 [illegible]	11 [illegible]	4 [illegible]

FIRES DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Hrs. Bit Was Idle (1000 hrs.)	Bit No.	Depth	Drill Collars	No.	O.D.	I.D.	Length	Air Hrs.	Tot. Hrs.	Hrs. on Job
5327	9	5336	3½		28	3							27	19

No.	Make	Type	Serial No.	Size	Weight	R.P.M.	Hours on Bottom	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Total Pump Strokes	T.	B.	Dr.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]									
2																	
3																	

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Mud Pump Strokes
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MODEL					MODEL					2	
OIL															3	
W.L.	F.C.	pH			DESILTER Make Qty.			Q. Flow		Q. Flow					4	
CHEMICALS					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Rope Size	No. Cut	Air Miles	Hours Work on Cut	Hours Drlg.	Ft. Left on Spool

REMARKS

	TIME START	TIME STOP	HRS.
[illegible]	8 [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	6 [illegible]	1 [illegible]
[illegible]	6 [illegible]	7 [illegible]	[illegible]
[illegible]	7 [illegible]	9 [illegible]	[illegible]
[illegible]	9 [illegible]	11 [illegible]	[illegible]
[illegible]	11 [illegible]	[illegible]	[illegible]

FIRES DRILLER'S SIGNATURE

B.O.P.	Tested	Elapsed Time	Pressure	Packing & Seal Inspected Item
Annular				
Pipe Rams				
Blind Rams				

Casing in Well (Ft.)	Cost
Fuel on Hand (U.S. g.a.l.)	gals.
Fuel Rec. & Delivd. (gals)	gals.
TOTAL	gals.
Fuel on Hand (U.S. g.a.l.)	gals.
Big Servers Cost	
Rocky Cash Cost	
Fuel Supply Cost	

	GAL	FR	CRD
TO	HR. USED	GAL	CRD
FUEL		FUEL DELIVERED	A.M. P.M.
CEMENT RETURNS (YES / NO)			

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM RIG: 105

TOTAL COMPANY TIME HRS. | TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

NOTED RING ON BIT @ Rotary Operations 24 Hrs.

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Sorted	Ft. Scrap Joints Sorted	Total Ft. Scrap	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1860 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1559 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START | STOP | HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested | Blowout Drill | Bits used | Pitting & Tool Inspection Sheet

Fuel on Hand | Fuel Rec. | TOTAL | Fuel on Hand | FUEL USED

TOTED RIGS ON ACT @ | Motor Operated | Hrs.

EQUIPMENT CHANGES | TRANSFER @

DATE FROM SRUD

TOTAL COMPANY FUEL HRS. | TOTAL CONTRACTOR'S FUEL HRS.

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE	Size	Joint	CLASSIFICATION 2	3	4	TOTAL	Bore Service	No. Broken Joints Repaired	Total No. Strings	CALIPER DATE	RESULTS	HIGH-PIPE RACK

CONSERVATION BOARD COPY

№ 1555 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool Pusher

CONSERVATION BOARD COPY

№ 1858 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONS TO
WELL

BUS. NO. ____ LOCATION ____ LSD ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____

MAILING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

REMARKS

TIME: START | STOP | TOTAL

FIRES ____ DRILLER'S SIGNATURE

FIRES ____ DRILLER'S SIGNATURE

FIRES ____ DRILLER'S SIGNATURE

B.O.P. | Tested | Opened Time | Pipe Size | Pipe Rams | Blind Rams

Kelly Bushing ____ Ft. Above Ground Level

Noted Ring on Bit #

Marker Operator: ____ No.

Check in Mud Clk #
Bag Sample Clk #
Bag Cuts Clk #
Fine Report Clk #

Fuel on Hand 12:01 a.m. ____ gals
Fuel Rec'd (Tanks Dipped) ____ gals
TOTAL ____ gals
Fuel on Hand 11:59 p.m. (Tanks Dipped) ____ gals
FUEL USED ____ gals

Cement Returns ____ Yes ____ No

EQUIPMENT CHANGES ____ DRILLER'S SIGNATURE ____ TRANSFER #

DAYS FROM SPUD:

TOTAL COMPANY TIME ____ HRS. | TOTAL CONTRACTOR'S TIME ____ HRS.

Approved by Operator's Representative ____

Approved by Toolpusher ____

DRILL PIPE	Size	Weight	Classification 2	3	4	Totals	Bit Number	Bit Serial Number	Type of Bit Used	Caliper Date	Results	New Pipe Rack

CONSERVATION BOARD COPY

№ 1857 HSW

POOR COPY

HEATH & SHERWOOD DRILLING | WESTERN

DAILY DRILLING LOG
DIRECTIONS TO
WELL

REMARKS

TIME

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1856 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONS TO WELL

MAILING POINT | SHIPPING POINT | MILES MOVED | ROAD CONDITIONS

REMARKS | TIMES

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

B.O.P. | EQUIPMENT CHANGES | TRANSFER #

TOTAL | FUEL USED | DATE FROM SPUD

TOTAL COMPANY TIME | TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	SIZE	GRADE	CLASSIFICATION 2	3	4	TOTAL	BORE SERIAL	IN. DRILLED LAST SERIAL	TOTAL IN DRILLED	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1855 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL _____ MAILING POINT _____ SHIPPING POINT _____ MILES MOVED _____ ROAD CONDITIONS _____

BUS. NO. _____ LOCATION _____ LSD ____ SEC ____ TWP ____ RGE ____ M ____ DATE _____ 19__

Date	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. up on Kelly

BIT	No.	Size	Type	Jets W.C.	Serial No.	Wgt.	R.P.M.	Actual at Depth	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.

	12 am	2 a.m.	4 a.m.	6 a.m.		12 am	2 a.m.	4 a.m.	6 a.m.		12 am	2 a.m.	4 a.m.	6 a.m.		Hour Cut Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					Make					Make					2	
GEL															3	
W.L.	P.H.	pH			RESULTS: Mesh Gel		U. Flow		D. Flow						4	
CHEMICAL					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Slip	Cut	Air Miles	Make Slip or Cut	Wear Slip	No. Left on Drum

REMARKS

	TIME	
	START	STOP

FIRES

DRILLER'S SIGNATURE

Date	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. up on Kelly

BIT	No.	Size	Type	Jets W.C.	Serial No.	Wgt.	R.P.M.	Actual at Depth	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		12 midn.	2 a.m.	4 a.m.	6 a.m.		Hour Cut Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					Make					Make					2	
GEL															3	
W.L.	P.H.	pH			RESULTS: Mesh Gel		U. Flow		D. Flow						4	
CHEMICAL					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Slip	Cut	Air Miles	Make Slip or Cut	Wear Slip	No. Left on Drum

FIRES

DRILLER'S SIGNATURE

Date	Footage	To	Wt. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shoots	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. up on Kelly

BIT	No.	Size	Type	Jets W.C.	Serial No.	Wgt.	R.P.M.	Actual at Depth	No.	Nozzles	No.	Pump No.	Pump Pressure	S.P.M.	Table Factor	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		4 p.m.	6 p.m.	8 p.m.	10 p.m.		12 midn.	2 a.m.	4 a.m.	6 a.m.		Hour Cut Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					Make					Make					2	
GEL															3	
W.L.	P.H.	pH			RESULTS: Mesh Gel		U. Flow		D. Flow						4	
CHEMICAL					GENERAL										5	
															Weather	Water
															Temp.	Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Slip	Cut	Air Miles	Make Slip or Cut	Wear Slip	No. Left on Drum

FIRES

DRILLER'S SIGNATURE

S.O.P.	Started	Finished Trip	Pipe Joints	Hours & Sub Contractor Work
Model				
Pump Model				
Drill Model				

TOTCO KIND ON BIT ☑ Bottom Hole Deviation _____ Deg. _____

Rig Service Chk.	
Rig Service Chk.	
Rig Service Chk.	
Rig Service Chk.	

Fuel in Stock (1.01 c.m.)	gals.	[redacted]
Fuel Rec. (Table) (gals)	gals.	
TOTAL	gals.	
Fuel on Hand (1.01 c.m.) (gals)	gals.	
FUEL USED	gals.	

[redacted]	Adv.	Fr.	Cbg.
To	Ad. Hrs.	Tot.	Cbg.
FUEL COUNTS		A.M. P.M.	
CONTRACT ACTUALS (Hrs.-Mo.)			

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE	Size	Joint	CLASSIFICATION 2	1	4	TOTAL	Date Added	In Drilled Hole Since	Total In Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

RBH 026-1 CONSERVATION BOARD COPY

№ 1834 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. ____ LOCATION ____ LSD ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____ 19__

DIRECTIONS TO WELL ____ MAILING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

DRILL COLLARS

WEIGHT

VISCOSITY

REMARKS

TIME: START STOP

FIRES ____ DRILLER'S SIGNATURE

FIRES ____ DRILLER'S SIGNATURE

FIRES ____ DRILLER'S SIGNATURE

B.O.P.

Fuel on Hand

TOTAL

FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME ____ HRS.

TOTAL CONTRACTOR'S TIME ____ HRS.

DRILL PIPE

CLASSIFICATION

CALIPER DATE

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1853 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
OPERATING TO
WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

DRILLING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START | STOP | HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Tested Pressure Test Pressure Packing & Leaf Replacement Date

Kelly Saver Sub #

Kelly Cock Sub #

Floor Valve Sub #

Fuel on Hand 7:00 a.m. GAL

Fuel Rec'd Today (GAL)

TOTAL

Fuel on Hand 11:59 p.m. (GAL)

FUEL USED

FUEL DOWN

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

EQUIPMENT CHANGES

TRANSFER #

TESTED RING ON KIT #

Boiler Operated Hrs.

DRILL PIPE	Size	Joint	CLASSIFICATION 2	3	4	TOTAL	Date Sawed	Ft. Sawed since Sawed	Total Ft. Sawed	CALIPER DATE	REGULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1552 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

WIS NO. LOCATION LSD SEC TWP RGE W DATE

DRILLING POINT SPUDDING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Tallpusher

CONSERVATION BOARD COPY

№ 1832 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

R.O.P. Tested Time Pick Up Pulling & Tripping Inspection Start

Fuel on Hand 7 a.m. gals.

Fuel Rec. (Today Load) gals.

TOTAL gals.

Fuel on Hand 11:59 p.m. (Tomorrow) gals.

FUEL USED gals.

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Wt.	CLASSIFICATION 2	3	4	TOTAL	Date Taken	Ft. Drilled Since Taken	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1851 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

MAILING POINT

EQUIPMENT POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

CONSERVATION BOARD COPY

№ 180 HSW

POOR COPY

DAILY DRILLING LOG

MAY 6

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

HEAD OFFICE PAYROLL COPY

№ 1799 HSW

POOR COPY

DRILLING LOG

DIRECTIONS TO WELL

DATE May 5

REMARKS

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

B.O.P.

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

DAYS FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

HSW 2004-1 HEAD OFFICE PAYROLL COPY

№ 1798 HSW

POOR COPY

DAILY DRILLING LOG

MAY 4

REMARKS

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SKID

Approved by Operator's Representative

Approved by Toolpusher

HEAD OFFICE PAYROLL COPY

№ 1797 PSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE JOB

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

FUEL USED

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CALIPER DATE

RESULTS

CONSERVATION BOARD COPY

№ 1725 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-H LOCATION Carnarvon

DATE March 7 1961

DIRECTIONS TO WELL

MAILING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

From	Footage	To	Hrs. on Footage	Wt. Bit Pipe	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Wt. Air	Sub. Wt.	C.B. Ft.	Hrs. on Collars
3352	32	3354	32	57	56	—	11	[illegible]						17

BITS No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Hours on Bit	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	G.	Gr.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	125	61	66			2	[illegible]	[illegible]	[illegible]			

	12 mid.	2 a.m.	4 a.m.	6 a.m.		12 noon	2 p.m.	4 p.m.	6 p.m.		12 mid.	2 a.m.	4 a.m.	6 a.m.		Hours Off Charge
WEIGHT	9.1	9.1	9.1	9.1	No. 1					No. 2					1	
VISCOSITY	[illegible]	[illegible]	[illegible]	60	Make					Make					2	
GEL															3	

W.L. F.C. pH DESILTER Hours On: U. Flow: D. Flow: SURVEYS Angle Direction 4 5

REMARKS: Rigging up

GENERAL: Rigging up

Weather Water Temp. Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Top	Wear Bot.	Air Miles	Make Break Up	Hours Slip	Hours Cut	Air Miles on Record

TOUR	From	Footage	To	Hrs. on Footage	Wt. Bit Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Wt. Air	Sub. Wt.	C.B. Ft.	Hrs. on Collars
3354	7½	3361	7½	[illegible]	56	4		11	[illegible]	2	10				17

BITS No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Hours on Bit	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	G.	Gr.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	125	42	103				65					

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Hours Off Charge
WEIGHT					No. 1					No. 2					1	
VISCOSITY					Make					Make					2	
GEL															3	

W.L. F.C. pH DESILTER Hours On: U. Flow: D. Flow: SURVEYS Angle Direction 4 5

REMARKS: Rigging up

GENERAL: Rigging up

Weather Water Temp. Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Top	Wear Bot.	Air Miles	Make Break Up	Hours Slip	Hours Cut	Air Miles on Record

TOUR	From	Footage	To	Hrs. on Footage	Wt. Bit Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS No.	O.D.	I.D.	Length	Wt. Air	Sub. Wt.	C.B. Ft.	Hrs. on Collars
3396	7½	3410	6½	31	31	8		11	[illegible]	2	10				14

BITS No.	Size	Type	Make/W.C.	Serial No.	Wgt.	R.P.M.	Hours on Bit	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	G.	Gr.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16			2	[illegible]	[illegible]	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		Hours Off Charge
WEIGHT				9.1	No. 1					No. 2					1	
VISCOSITY				60	Make					Make					2	
GEL															3	

W.L. F.C. pH DESILTER Hours On: U. Flow: D. Flow: SURVEYS Angle Direction 4 5

REMARKS: Rigging up, 12½ Drill Collars

GENERAL: Rigging up

Weather Water Temp. Bbls.

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear Top	Wear Bot.	Air Miles	Make Break Up	Hours Slip	Hours Cut	Air Miles on Record

REMARKS	TIME START	TIME STOP	HRS.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	6.30	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
FIRES	DRILLER'S SIGNATURE		
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
FIRES	DRILLER'S SIGNATURE		
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
FIRES	DRILLER'S SIGNATURE		
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
FIRES	DRILLER'S SIGNATURE		

B.O.P. Tested Blind Rams Pipe Rams Hydraulically Operated Rams

Model

Pipe Rams

Blind Rams

STOOD WING ON AT 8 Action Observed 2 hrs. 4 min.

Fuel on Hand 2.01 a.m. gals.

Fuel Rec. & Today (gals) gals.

TOTAL gals.

Fuel on Hand 11.59 p.m. (Midnight) gals.

FUEL USED gals.

Rig Service Cha. 4

Rig Service Cha. 5

Rig Repair Cha. 4

Rig Repair Cha. 5

Cement Returns (Yes/No)

BKN JTS CIG

TO KB USED SKI CEM

PUMP FUEL DOWN P.M. P.M.

DAYS FROM SPUD: 57

EQUIPMENT CHANGES

TRANSFER 2

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joints	CLASSIFICATION 1	2	3	TOTAL	Date Received	Ft. Drilled Since Received	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM TYPE HACK

CONSERVATION BOARD COPY

№ 1737 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC. TWP. RGE. W. DATE MARCH 29 19 81

DIRECTIONS TO WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS | TIME

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

B.O.P. | EQUIPMENT CHANGES | DATE FROM SPUD

FUEL USED

CONSERVATION BOARD COPY

№ 1736 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION LEO ___ SEC. ___ TWP. ___ RGE. ___ W ___ DATE ___ 19 71

DIRECTIONS TO WELL ___ DRILLING POINT ___ SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

REMARKS	TIME START	TIME STOP	TIME TOTAL
FIRES			
DRILLER'S SIGNATURE			

REMARKS	TIME START	TIME STOP	TIME TOTAL
FIRES			
DRILLER'S SIGNATURE			

REMARKS	TIME START	TIME STOP	TIME TOTAL
FIRES			
DRILLER'S SIGNATURE			

B.O.P. Tested ___ Equipment Times ___ Pipe Lost ___ Packing & Seal Inspection Date ___

Mudder ___ Pump No. ___ Blind Ram ___

Casing Hours Chg. ___ Rig Service Chg. ___ Daily Cost Chg. ___ Fire Equip. Chg. ___

Pipe on Hand (5:01 p.m.) ___ Pipe Run & Tallied (until) ___ TOTAL ___ Pipe on Hand (11:59 p.m. (midnight)) ___ FUEL USED ___

RAN ___ PB ___ CSG ___ TD ___ KB USED ___ SAS ___ CEM ___ PLUG DOWN ___ A.M. P.M. ___ CEMENT RETURNS (YES/NO) ___

EQUIPMENT CHANGES ___ TRANSFER # ___

DAYS FROM SPUD 5

TOTAL COMPANY TIME ___ HRS. TOTAL CONTRACTOR'S TIME ___ HRS.

Approved by Operator's Representative ___

Approved by Toolpusher ___

VOIDED RING ON BIT # ___ Bailer Operated 2 - 24 Hrs.

DRILL PIPE	Size	Length	CONDITION 3	2	1	TOTAL	Date Inspected	Ft. Drilled (since Inspection)	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

HSW 3016-1 CONSERVATION BOARD COPY

№ 1735 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LOT SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS | TIME START | STOP | HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. | Tested | Pressure Test | Fuel | Parking & Yard

Fuel on Hand | Fuel Rec. | Fuel Rec. | Fuel on Hand | TOTAL | FUEL USED

EQUIPMENT CHANGES | TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME | TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	SIZE	WEIGHT	CLASSIFICATION 2	3	4	TOTAL	Date Received	Pc. Received (Actual Received)	Total Pc. Received	CALIPER DATE	RESULTS	FROM PIPE RACK

NBH 600-1

CONSERVATION BOARD COPY

№ 1734 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION CARLS MAIA LSD SEC TWP RGE W DATE MARCH 26 19 71

DIRECTIONAL WELL

PASSING POINT

MILES MOVED

ROAD CONDITIONS

TOUR	FROM	FOOTAGE	TO	HRS. ON BOTTOM	WT. ON BIT (1000 lbs.)	GRADE	ENGINE	DRILL COLLARS	No.	O.D.	I.D.	LENGTH	WT.	TOTAL WT.	C.B.	TO TOP OF DRILL COLLARS
DAYLIGHT	3060	19	3079		44.9	51	1		16	4½	2	10				3
NOON																
MIDNIGHT																

BIT No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Pressure (1000 lbs.)	Hrs.	Remarks	Min.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
13	7⅞	Mill	3-14	91246	150	150	35	19			1	750	60				

	12 noon	2 p.m.	4 p.m.	6 p.m.		10 p.m.	12 midnight	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR NOISE	Hours On Motor
WEIGHT	7	14	17	14	No. 1					No. 2					1	
VISCOSITY	60	63			MODEL					MODEL					2	
GEL															3	
W.L.	P.H.	pM	DESILTER Hours On		D. Flow		D. Flow								4	
ADDITIVES				GENERAL											5	
															6	
Drilling Line Removed	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Up	Cut	Air Miles	Date Slip or Cut	Hours Trips	Ft. Left on Spool		Weather	Water

TOUR	FROM	FOOTAGE	TO	HRS. ON BOTTOM	WT. ON BIT (1000 lbs.)	GRADE	ENGINE	DRILL COLLARS	No.	O.D.	I.D.	LENGTH	WT.	TOTAL WT.	C.B.	TO TOP OF DRILL COLLARS
DAYLIGHT	3079	10	3089	7½	44.2	51	3		16	4½	2	10				3
NOON																
MIDNIGHT																

BIT No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Pressure (1000 lbs.)	Hrs.	Remarks	Min.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
14	7⅞	Mill	3-14	91246	150	150	45	13			1	750	60				

	12 noon	2 p.m.	4 p.m.	6 p.m.		10 p.m.	12 midnight	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR NOISE	Hours On Motor
WEIGHT	14	14	14	14	No. 1					No. 2					1	
VISCOSITY	62	63	64	62	MODEL					MODEL					2	
GEL															3	
W.L.	P.H.	pM	DESILTER Hours On		D. Flow		D. Flow								4	
ADDITIVES				GENERAL											5	
															6	
Drilling Line Removed	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Up	Cut	Air Miles	Date Slip or Cut	Hours Trips	Ft. Left on Spool		Weather	Water

TOUR	FROM	FOOTAGE	TO	HRS. ON BOTTOM	WT. ON BIT (1000 lbs.)	GRADE	ENGINE	DRILL COLLARS	No.	O.D.	I.D.	LENGTH	WT.	TOTAL WT.	C.B.	TO TOP OF DRILL COLLARS
DAYLIGHT	3089					51	3		16	4½	2	10				3
NOON																
MIDNIGHT																

BIT No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Pressure (1000 lbs.)	Hrs.	Remarks	Min.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.

	12 noon	2 p.m.	4 p.m.	6 p.m.		10 p.m.	12 midnight	2 a.m.	4 a.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR NOISE	Hours On Motor
WEIGHT			14		No. 1					No. 2					1	
VISCOSITY			62		MODEL					MODEL					2	
GEL															3	
W.L.	P.H.	pM	DESILTER Hours On		D. Flow		D. Flow								4	
ADDITIVES				GENERAL											5	
															6	
Drilling Line Removed	Size	Make	Serial No.	No. Lines	Trips	Tow Miles	Total Miles	Wear Up	Cut	Air Miles	Date Slip or Cut	Hours Trips	Ft. Left on Spool		Weather	Water

BOP	Tested	Pressure Test	Pipe Size	Rotating & Bell Nipple Size
Make				
Pipe Rams				
Blind Rams				

Fuel on Hand (Ltr) a.m.	ltrs	
Fuel Rec. & Trans. (ltrs)	ltrs	
TOTAL	ltrs	
Fuel on Hand (Ltr) p.m.	ltrs	
FUEL USED	ltrs	

	RAN	PR	CSG
TO	PR USED	SAX	CEM
PLUG DOWN			P.M.
CEMENT RETURNS			

EQUIPMENT CHARGES	DRILLER'S SIGNATURE	TRANSFER #

DAYS FROM SPUD: 53

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Length	CLASSIFICATION 1	2	3	TOTAL	Date Delivered	Sent to Drilled Joints Delivered	CALIPER DATE	RESULTS	FROM PIPE BACK

REMARKS

	START	STOP	HRS.
[illegible]	12	1	1½
[illegible]	1	2	1½

FIRES

DRILLER'S SIGNATURE

	START	STOP	HRS.
Drilling	9	11	2
Circulate - [illegible]	11	11	½
Drilling - Cross	11	12	1½
Laying down - [illegible]	12	4	7½
Rig Service	4	4½	½
Drilling [illegible]	4½	6	1½

FIRES

DRILLER'S SIGNATURE

	START	STOP	HRS.
Laying down - [illegible]	6	9	3
[illegible]	9	12	3

Circulate for [illegible]

FIRES

CONSERVATION BOARD COPY

№ 1732 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 1141 LOCATION [illegible] SEC ___ TWP ___ RGE ___ W ___ DATE [illegible] 25 ___ 19 71

DIRECTIONS TO WELL [illegible]

MAILING POINT ___ SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

Date	Footage	To	Hrs. on Bottom	Wt. on Bit	Rpm	Engine	Drill Collars No.	O.D.	I.D.	Length	Kelly	Sub. Wt.	Total Hrs.
3031	/	/		[illegible]	50	4	16	[illegible]	2	10			7

Bit No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Actual in Carbd.	Hrs.	Recovered	Wt.	Pump No.	Pump Pressure	S.P.M.	Table Footage	T.	B.	G.

	12 Hrs.	2 a.m.	4 a.m.	6 a.m.		12 Hrs.	2 a.m.	4 a.m.	6 a.m.		12 Hrs.	2 a.m.	4 a.m.	6 a.m.	Mud Additives	Mud Chemical Charges
Weight				9.1											1	
Viscosity				35											2	
Gel															3	
															4	
															5	
															6	
															7	
															8	

M.L. ___ F.C. ___ pH ___ Resistivity Mud Cir. ___ O. Flow ___ D. Flow ___ Surface Action Taken ___

Additives: 15 sk. Gel. 15 sk. Gel. General: 15 sk. Gel. 14 sk. Gel. 1 sk. Gel. 1 sk. Gel. 1 sk. Gel.

Driving Line Removed	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear		All Miles	Wear Since Slip	Wear Since Cut	Wear Since Ream	Wear Since Trip	Wear Since Repair

Weather ___ Temp. ___ Wind ___

Date	Footage	To	Hrs. on Bottom	Wt. on Bit	Rpm	Engine	Drill Collars No.	O.D.	I.D.	Length	Kelly	Sub. Wt.	Total Hrs.
3031	23	3060	23	[illegible]	51	1	16	[illegible]	2	10			30

Bit No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Actual in Carbd.	Hrs.	Recovered	Wt.	Pump No.	Pump Pressure	S.P.M.	Table Footage	T.	B.	G.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	150	23	[illegible]			1	[illegible]	[illegible]				

	12 Hrs.	2 a.m.	4 a.m.	6 a.m.		12 Hrs.	2 a.m.	4 a.m.	6 a.m.		12 Hrs.	2 a.m.	4 a.m.	6 a.m.	Mud Additives	Mud Chemical Charges
Weight	9.1	9.1		9.1											1	
Viscosity	40	40		[illegible]											2	
Gel															3	
															4	
															5	
															6	
															7	
															8	

M.L. ___ F.C. ___ pH ___ Resistivity Mud Cir. ___ O. Flow ___ D. Flow ___ Surface Action Taken [illegible]

Additives: 15 sk. Gel. General: ___

Driving Line Removed	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Wear		All Miles	Wear Since Slip	Wear Since Cut	Wear Since Ream	Wear Since Trip	Wear Since Repair

Weather ___ Temp. ___ Wind ___

Hours	Remarks	Time Start	Time Stop	Total Hrs.
	[illegible]	[illegible]		7

Fires ___ Driller's Signature ___

Hours	Remarks	Time Start	Time Stop	Total Hrs.
	[illegible]	7	10	2
	[illegible]	10	12	2
	[illegible]	12	1	1/2
	[illegible]	1	2	1
	[illegible]	2	[illegible]	1/2
	[illegible]	[illegible]	[illegible]	1/2
	[illegible]	[illegible]	[illegible]	1/2
	[illegible]			
	[illegible]			

Fires ___ Driller's Signature ___

Hours	Remarks	Time Start	Time Stop	Total Hrs.
	[illegible]	4	4	1/2
	[illegible]	4	[illegible]	1/2
	Drilling	[illegible]	7	1/2
	[illegible]	7	7.30	1/2
	[illegible]	7	8	1
	Survey at 3060	10	11	1
	Drilling	11	11.30	1/2
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]			

Fires ___ Driller's Signature ___

B.O.P.	Tested	Pressure Time	Pressure	Pressure & Test Duration Min.
Model:				
Pipe Rams	X			
Blind Rams	X			

Tested Rams on Bit # ___ Bottom Overshot 2-24 No. ___

Fuel on Hand 2:01 a.m. ___ gals. Fuel Rec. & Taken (Gals.) ___ gals. TOTAL ___ gals. Fuel on Hand 11:59 p.m. (Gals.) ___ gals. FUEL USED ___ gals.

Equipment Changes ___ Transfer # ___

Days from Spud 5 ___

Total Company Time ___ hrs. Total Contractor's Time ___ hrs.

Approved by Operator's Representative ___

Approved by Toolpusher ___

Drill Pipe	Size	Length	Classification 1	2	3	4	Total	Date Delivered	Ft. Drilled Since Delivery	Total Ft. Drilled	Caliper Date	Results	Trim Pipe Back

CONSERVATION BOARD COPY

No 1731 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 1141 LOCATION LSD SEC TWP RGE W DATE JOB NO.

MILES MOVED ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

S.O.P.

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Tool Pusher

FUEL USED

CLASSIFICATION

CALIPER DATE RESULTS

CONSERVATION BOARD COPY

№ 1730 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL

RIG NO. 11-11 LOCATION LOT SEC TWP RGE W DATE March 23 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

S.O.P.

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1729 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO:

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START | STOP | HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1728 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. W DATE

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Rented Expired Test Last Packing & Seal Inspection Date

Boiler Operated Hrs.

TOTAL

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool Pusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Bent Joints	% Worn Joints Tested	Type % Worn	CALIPER DATE	RESULTS	FROM TYPE SIZE

CONSERVATION BOARD COPY

№ 1727 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

BUILDING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

B.O.P.

TOTAL

FUEL USED

DRILL PIPE

CLASSIFICATION

CALIPER DATE

RESULTS

FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1850 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

HAULING POINT EXCITING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME START STOP

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

TOTAL

FUEL USED

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tangusher

CONSERVATION BOARD COPY

№ 1519 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. M DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, FLOW, MOVE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

EQUIPMENT CHANGES

TRANSFER TO

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

TOTAL

FUEL USED

CONSERVATION

DRILL PIPE

CASING

CALIPER DATE

WEIGHT

FROM PIPE RACK

CONSERVATION BOARD COPY

№ 18418 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION SEC. TWP. RGE. W. DATE

DIRECTIONS TO WELL WELLHEAD POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Tested Elapsed Time Rigs Hrs. Rotating & Spud Hrs.

Kind

Size & No.

Brand Name

Cement Plug Off Time

Rig Down Time

Rig Up Time

Drill Time

Fire Drill Time

Fuel on Hand (3.00 a.m.)

From Rec. & Today (gals)

TOTAL

Fuel on Hand (11.59 p.m. tomorrow)

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL OPERATOR'S TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CASED RING ON BIT #

Bore Diameter

Hrs.

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Joints Remaining	No. Stands Joints Remaining	Joints to Be Drilled	CALIPER DATE	RESULTS	FROM TIME BACK

CONSERVATION BOARD COPY

№ 1817 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. TESTED

TOTAL

FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

No 1846 RSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

BIG NO. LOCATION LSD SEC TWP RGE W DATE 19

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative

Approved by Tool pusher

CONSERVATION BOARD COPY

№ 1845 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME START STOP HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Required Test Rec. Holding & Test Inspection Date

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL SUBCONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Tool pusher

DRILL PIPE CLASSIFICATION TOTAL

CONSERVATION BOARD COPY

№ 1844 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP TOTAL

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Opened Trip Pulled Packing & Seal Inspection Done

Check in Mud Tank

Rig Serviced

Mud Cleaned

Pipe Racked

Fuel on Hand (7:00 a.m.) gals.

Fuel Rec'd Today (gals) gals.

TOTAL gals.

Fuel on Hand (11:59 p.m. (midnight)) gals.

FUEL USED gals.

GAS TO USED GAS CSM

FUEL DELIVERED A.M. P.M.

CEMENT RETURNS (YES / NO)

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL CONTRACTOR TIME HRS.

TOTAL CONTRACTOR COST

Approved by Operator's Representative

Approved by Toolpusher

TOTCO RING ON BIT #

Bit Operated No

DRILL PIPE	Size	Joint	CLASSIFICATION 1	2	3	4	TOTAL	Date Delivered	Ft. Delivered (Give Number)	Total Ft. Delivered	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1843 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Contractor

CONSERVATION BOARD COPY

№ 1842 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRED

DRILLER'S SIGNATURE

FIRED

DRILLER'S SIGNATURE

FIRED

EQUIPMENT CHANGES

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1841 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

DRILLING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME — START | STOP | HRS.

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TOTAL

FUEL USED

CONSERVATION

CONSERVATION BOARD COPY

№ 1810 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Pressure Test Rig Up Time Rig Down Time Rig Up Date Rig Down Date

Mud: Pipe & Tools: Drill Bits:

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL BOX Size Hole CLASSIFICATION 1 2 3 4 TOTAL Date Started In Hole Date Completed Cuttings Sent Out Cuttings Sent Back Results Results Sent Back

CONSERVATION BOARD COPY

№ 1839 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

TRANSFER #

TOTAL

FUEL USED

DATE FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1838 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

LOCATION SEC TWP RGE W DATE 19

DRILLING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME: START, STOP, TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. TEST

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE SIZE WEIGHT CONDITION TOTAL DATE SERVICED DATE REMOVED CALIPER DATE REMARKS FROM FIRE RACK

CONSERVATION BOARD COPY

№ 1837 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. W. DATE 19

DRILLING POINT GOVERNMENT REPORT MILES MOVED ROAD CONDITIONS

REMARKS | TIME START | STOP | HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Tested Elapsed Time Rem. Lost Packing & Spot Inspection Form

Fuel on Hand (U.S. g.a.) gal. Gas Diesel

Fuel Rec. (Tanks Loads) gal.

TOTAL gal.

Fuel on Hand (Imp. g.a.) gal.

FUEL USED gal.

Gasoline Used Gal. Rig Up Time Rig Down Time Daily Cost Time Fire Fighting Time

Bit Used Size Make Serial No. Footage Hrs. Rotating Hours Total Hours Bit Condition

Total Footage Total Rotating Hours Total Hours Average Footage per Hour Average Rotating Hours per Bit

Total Bits Used Average Footage per Bit

Total Hours on Bit

Bit Cost Total Bit Cost Average Bit Cost per Footage Average Bit Cost per Hour

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DAYS FROM SPUD

FUEL USED

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1835 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1834 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO

WELL

DRILLING FROM

MILES MOVED

ROAD CONDITIONS

DRILL COLLARS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

DRILLING FROM

DRILL COLLARS

FIRES

DRILLER'S SIGNATURE

DRILLING FROM

DRILL COLLARS

FIRES

DRILLER'S SIGNATURE

B.O.P.

EQUIPMENT CHANGES

TRANSFER #

TOTAL

FUEL USED

DATE TRANSFERRED

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE

CLASSIFICATION

TOTAL

CALIPER DATE

RESULTS

CONSERVATION BOARD COPY

№ 1533 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIMES

DRILLER'S SIGNATURE

FUEL USED

CONSERVATION BOARD COPY

№ 1832 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

INVESTIGATION TO

WELL

REMARKS

TIME

START

FINISH

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Technician

FUEL USED

CALIPER DATA

CONSERVATION BOARD COPY

№ 1831 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC. TWP. RGE. W DATE

HAULING POINT SHOPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME START

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM RIG

TOTAL CONTRACTOR TIME

TOTAL CONTRACTOR TIME

Approved by Operator's Representative

Approved by Tool pusher

FUEL USED

CONSERVATION BOARD COPY

№ 1830 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. W. DATE

HAULING POINT DISTANCE MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS.

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

DAYS FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1829 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

WIRE NO. LOCATION SEC. TWP. RGE. W DATE

BILLING POINT DISPATCH POINT MILES MOVED ROAD CONDITIONS

DRILL COLLARS

MOTOR HOURS

WEIGHT

VISCOSITY

OIL

DRILLER

ADDITIVES GENERAL

REMARKS

TIME START STOP

FIRES DRILLER'S SIGNATURE

DRILL COLLARS

MOTOR HOURS

WEIGHT

VISCOSITY

OIL

DRILLER

ADDITIVES GENERAL

FIRES DRILLER'S SIGNATURE

DRILL COLLARS

MOTOR HOURS

WEIGHT

VISCOSITY

OIL

DRILLER

ADDITIVES GENERAL

FIRES DRILLER'S SIGNATURE

B.O.P. TOTAL FUEL USED

EQUIPMENT CHANGES DRILLER'S SIGNATURE TRANSFER #

DATE FROM SKID

TOTAL CONTRACT TIME TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Tallyman

CLASSIFICATION

CONSERVATION BOARD COPY

№ 1829 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL TO:

WELL

AFE NO.

LOCATION

LSD SEC TWP RGE W

DATE

DRILLING POINT

DIRECTIONAL POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME: START, STOP, TOTAL

FIRES

DRILLER'S SIGNATURE

DST #2

EQUIPMENT CHANGES

TRANSFER #

FUEL USED

TOTAL

DATE FROM SPUD

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CALIPER DATE

RESULTS

INDUCTION DATE

CONSERVATION BOARD COPY

№ 1828 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO:

WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT REPORTING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP HRS

FIRES

DRILLER'S SIGNATURE

S.O.P.

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL DRILLING TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Testpusher

TOTAL

FUEL USED

DRILL PIPE	SIZE	WEIGHT	CLASSIFICATION 2	3	4	TOTAL	DATE RECEIVED	FT. DRILLED LAST RECEIVED	TOTAL FT. DRILLED	CALIPER DATE	RESULTS	FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1827 NSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION SEC. TWP. RGE. W. DATE

HAULING FROM MOVING TO MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, FINISH, DATE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Expired Time Date Working & Spare Preventer Tested

Rig Service Time

Fuel on Hand

Fuel Rec'd Today

TOTAL

FUEL USED

Days from Spud

Total Company Time HRS.

Total Contractor's Time HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Length	CLASSIFICATION 1	2	3	TOTAL	Date Delivered	Rt. Received Office Receipt	Sent to Drillers	CALIPER DATE	RESULTS	FROM TUBE DATE

EQUIPMENT CHANGES

TRANSFER #

CONSERVATION BOARD COPY

№ 1826 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING WITH FORM

DAILY DRILLING LOG

DIRECTIONS TO:

WELL

RIG NO. LOCATION LEASE SEC. TWP. RGE. W DATE 19

MAILING POINT SHIPPING POINT

MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP DIFF.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Expected Time Pipe Lock Packing & Seal Inspection Date

Model

Pipe Rams

Blind Rams

O RING ON BIT #

Bailer Operated

Hrs.

Fuel on Hand (2:01 a.m.)

Fuel Rec. Today (gal.)

TOTAL

Fuel on Hand (7:00 p.m. tomorrow)

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Ft. Drilled since Delivered	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

NEW DDL-T

CONSERVATION BOARD COPY

№ 1400 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESRERN)

DAILY DRILLING LOG

RIG NO. [illegible] LOCATION [illegible] SEC. ___ TWP. ___ RGE. ___ W ___ DATE [illegible] 19__

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT [illegible] MILES MOVED ___ ROAD CONDITIONS ___

From | Footage | To | Hrs. on Bottom | Wt. Drill Pipe (1000 lbs.) | Stands | Singles | DRILL COLLARS | REMARKS | TIME: START | STOP | HRS.

WEIGHT

VISCOSITY

GEL

ADDITIVES | GENERAL

[illegible]

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

B.O.P. | Tested | Elapsed Time | Pipe Rams | Blind Rams

O RING ON KIT # | Boiler Operated [illegible] Hrs.

Fuel on Hand 12:01 a.m. | Fuel Rec. d Today | TOTAL | Fuel on Hand 11:59 p.m. | FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD [illegible]

TOTAL COMPANY TIME | TOTAL CONTRACTOR'S TIME

DRILL PIPE | Size | Joint | CLASSIFICATION | TOTAL | Date Setters | Ft. Drilled | Total Ft. Drilled | CALIPER DATE | RESULTS | FROM PIPE RACK

Approved by Operator's Representative [illegible]

Approved by Toolpusher [illegible]

HSW DDL-1

CONSERVATION BOARD COPY

№ 1399 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. DATE 19

MILES MOVED ROAD CONDITIONS

MIDNIGHT TO NOON

NOON TO MIDNIGHT

REMARKS

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested

DRILL PIPE

CLASSIFICATION

FUEL USED

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

Approved by Operator's Representative

Approved by Toolpusher

HSW 3004-3

CONSERVATION BOARD COPY

№ 1398 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. DATE

MILES MOVED ROAD CONDITIONS

Time	Footage	To	No. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Wt.	Sub Wt.	Total Weight
405					7	1-4		16	5		160	18		7

Bit No.	Size	Type	Make/Mfg.	Serial No.	Wgt.	R.P.M.	Bit Hours at Depth	Dev.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
16	6¾	PDC	Reg	261028													

	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS
WEIGHT					No. 1 Model					No. 2 Model					
VISCOSITY															
GEL															

W.L. F.C. pH DESILTER Hours On Q. Flow D. Flow

SUPPLIES: 1 2 3 4 5 6 7 8

Weather Temp. Water Bbls.

Drilling Line Record: Size Make Serial No. No. Lines Trips Trip Miles Total Miles Slip to Cut Air Miles Slip to Cut Slip to Cut At Depth

REMARKS

	Start	Stop	Hrs.
Trip in with 6¾ bit, 160' D.C.	12 00		
Drill cement, 4½" HWD. Trip			
Connect to @ 224' &		14 00	2
Pull drill string and [illegible]			
Move to [illegible]	14 30	15 30	1
Test 13⅜ casing [illegible]	15 30	17 30	2
Rig up [illegible]	17 30		
Install, [illegible]		18 30	1
Test B.O.P. [illegible]	18 30	18 45	¼
FIRES	18 45	19 15	½

DRILLER'S SIGNATURE

Time	Footage	To	No. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Wt.	Sub Wt.	Total Weight
405	22	427	1		7									

Bit No.	Size	Type	Make/Mfg.	Serial No.	Wgt.	R.P.M.	Bit Hours at Depth	Dev.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
16	6¾	PDC	Reg	261028	10	75	22	1									

	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS
WEIGHT	8.4	8.4	8.4		No. 1 Model					No. 2 Model					
VISCOSITY		28	27												
GEL		4/5													

W.L. 2.0 F.C. pH DESILTER Hours On Q. Flow D. Flow

SUPPLIES: 1 2 3 4 5 6 7 8

Weather Temp. Water Bbls.

Drilling Line Record: Size Make Serial No. No. Lines Trips Trip Miles Total Miles Slip to Cut Air Miles Slip to Cut Slip to Cut At Depth

REMARKS

	Start	Stop	Hrs.
Drill 6¾ hole	8 30	9 30	1
Drill hole & survey	9 30	11 30	2½
Drill cement - Shoe @ 424	11 30	2 30	3
Drill 6¾ hole	2 30	4 00	1½
Rig service	4 00	4 30	½
FIRES			

DRILLER'S SIGNATURE

Time	Footage	To	No. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Wt.	Sub Wt.	Total Weight
412	47	474	2		7	1		16	5	2	160	18		

Bit No.	Size	Type	Make/Mfg.	Serial No.	Wgt.	R.P.M.	Bit Hours at Depth	Dev.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	B.	G.
16	6¾	PDC	Reg	261028	10	100	69	4									

	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS
WEIGHT	8.4				No. 1 Model					No. 2 Model					
VISCOSITY															
GEL															

W.L. F.C. pH DESILTER Hours On Q. Flow D. Flow

SUPPLIES: 1 2 3 4 5 6 7 8

Weather Temp. Water Bbls.

Drilling Line Record: Size Make Serial No. No. Lines Trips Trip Miles Total Miles Slip to Cut Air Miles Slip to Cut Slip to Cut At Depth

REMARKS

	Start	Stop	Hrs.
Drill 6¾ hole	4 30	7 30	3
Work on rotary table	7 30		
Drill hole [illegible]		12 30	5
FIRES			

DRILLER'S SIGNATURE

5 QUART GEL TO SEAL AND DUMP HOLE.

B.O.P. Tested Blind Ram Pipe Ram Blind Ram

Casing & Mud Inspection Form

Fuel on Hand (7:01 a.m.) gals.

Fuel Rec. (Today only) gals.

TOTAL gals.

Fuel on Hand (11:59 p.m. today) gals.

FUEL USED gals.

CASING REPORT

	Size	Weight	Grade	Thd.	Cpl.	Set At

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DATE FROM SPUD 11

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Stand Balance	N. Stroked (Joint Balance)	Total N. Stroked	CALIPER DATE	RESULTS	FROM PIPE RACK

FORM 2001-1

CONSERVATION BOARD COPY

№ 1397 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. ____ LOCATION ____ LSD ____ SEC. ____ TWP. ____ RGE. ____ W. ____ DATE ____ 19__

DIRECTIONS TO WELL ____ MAILING POINT ____ SHIPPING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

DRILL STEM TOOL CONDITION

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Wt.	Sub. Wt.	T.D. Ft.	Ft. up on Kelly

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Hours at Center	Hrs.	Recovered	Hrs.	Bearing No.	Bearing Condition	R.P.M.	Safety Factor	T.	K.	G.
BIT																		

	12 hrs.	2 a.m.	4 a.m.	6 a.m.	MUD	10 a.m.	12 noon	2 p.m.	4 p.m.	6 p.m.	MUD	10 a.m.	12 noon	2 p.m.	4 p.m.	MOTOR HOURS	Hours Off Charge
WEIGHT					No. 1						No. 2					1	
VISCOSITY					WEIGHT						WEIGHT					2	
GEL																3	
W.L.	F.C.	pH			DESILTER: Hours On		U. Flow		D. Flow							4	
ABRASIVES:					GENERAL:											5	
																6	
																Weather	Water
																Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear			Ave. Miles	Wear Rate in Cut	Wear Time	Ft. Left on Spool

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Wt.	Sub. Wt.	T.D. Ft.	Ft. up on Kelly

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Hours at Center	Hrs.	Recovered	Hrs.	Bearing No.	Bearing Condition	R.P.M.	Safety Factor	T.	K.	G.
BIT																		

	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR HOURS	Hours Off Charge
WEIGHT					No. 1					No. 2					1	
VISCOSITY					WEIGHT					WEIGHT					2	
GEL															3	
W.L.	F.C.	pH			DESILTER: Hours On		U. Flow		D. Flow						4	
ABRASIVES:					GENERAL:										5	
															6	
															Weather	Water
															Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear			Ave. Miles	Wear Rate in Cut	Wear Time	Ft. Left on Spool

From	Footage	To	No. on Bottom	Wt. Drill Pipe (1000 lbs.)	Shands	Engine	DRILL COLLARS	No.	O.D.	I.D.	Length	Wt. Wt.	Sub. Wt.	T.D. Ft.	Ft. up on Kelly

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Hours at Center	Hrs.	Recovered	Hrs.	Bearing No.	Bearing Condition	R.P.M.	Safety Factor	T.	K.	G.
BIT																		

	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	MUD	8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR HOURS	Hours Off Charge
WEIGHT					No. 1					No. 2					1	
VISCOSITY					WEIGHT					WEIGHT					2	
GEL															3	
W.L.	F.C.	pH			DESILTER: Hours On		U. Flow		D. Flow						4	
ABRASIVES:					GENERAL:										5	
															6	
															Weather	Water
															Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear			Ave. Miles	Wear Rate in Cut	Wear Time	Ft. Left on Spool

REMARKS	TIME START	TIME STOP	TOTAL HRS.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LEASE SEC TWP RGE DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS | TIME START | FINISH | HRS.

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

FIRES DRILLER'S SIGNATURE

B.O.P. Tested Diesel Tank Pump Packing & Seal Inspection Date

Mud Pump Rate

Fuel Rate

Wind Rate

Fuel on Hand 12:01 a.m.

Fuel Rec. & Taken (add)

TOTAL

Fuel on Hand 11:59 p.m. (amount)

FUEL USED

Drawn on Acct. Chk #

Rig Repairs Chk #

Daily Cash Chk #

Fire Equip. Chk #

Boiler Operator

RING ON KT.

CLASSIFICATION

DRILL PIPE Size Grade 2 3 4 TOTAL Bent Sections Hr. Drilled Since Bushing Total Ft. Drilled CALIPER DATA RESULTS FROM PIPE DATA

EQUIPMENT CHANGES TRANSFER

DATE FROM SPUD

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

NEW DDL-1

CONSERVATION BOARD COPY

№ 1396 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

Pump	Stroke	Liner	Jets/W.C.	Serial No.	Hyd.	R.P.M.	Actual at Cable	No.	Reversal	No.	Power No.	Power Pressure	R.P.M.	Tubular Change	T.	B.	Gl.

	12 am	3 a.m.	6 a.m.	9 a.m.		12 m	3 p.m.	6 p.m.	9 p.m.		12 m	3 a.m.	6 a.m.	9 a.m.		Time for Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MODEL					MODEL					2	
GEL															3	
W.L.	P.C.	pH		DESILTER Hours Op.			U. Flow		O. Flow						4	
															5	
															6	

Drilling Line Record: Size | Make | Serial No. | No. Lines | Trips | Ton Miles | Total Miles | Slip & Cut | Air Miles | Slip Date | Slip Time | Slip Depth

Time	Remarks	Start	Stop	Hrs.
	Rig Rig Down Move Drain	11:00		
	Down		1:00	1½
	Pressure [illegible]	1:00	[illegible]	[illegible]
	Mud	[illegible]	[illegible]	1
	Repair [illegible]	[illegible]	[illegible]	1
	Rig Service	1:45	2:00	¼

FIRES

DRILLER'S SIGNATURE

	Move [illegible]	8:30	10:30	2
	[illegible]			
	[illegible]	10:30		
	[illegible]		4:00	6

Time	Remarks	Start	Stop	Hrs.
	Rig Rig Down Move Drain	8:30	10:30	2
	Move [illegible]	10:30	12:30	2
	[illegible]	12:30		
	[illegible]		1:00	2

FIRES

DRILLER'S SIGNATURE

	Rig Rig Down Move Drain	1:30	2:30	1
	Move Drain & [illegible]	2:30	12:30	2
	[illegible]	12:30		
	[illegible]		12:30	2

Pump	Stroke	Liner	Jets/W.C.	Serial No.	Hyd.	R.P.M.	Actual at Cable	No.	Reversal	No.	Power No.	Power Pressure	R.P.M.	Tubular Change	T.	B.	Gl.

	12 am	3 a.m.	6 a.m.	9 a.m.		12 m	3 p.m.	6 p.m.	9 p.m.		12 m	3 a.m.	6 a.m.	9 a.m.		Time for Change
WEIGHT					No. 1					No. 2					1	
VISCOSITY					MODEL					MODEL					2	
GEL															3	
W.L.	P.C.	pH		DESILTER Hours Op.			U. Flow		O. Flow						4	
															5	
															6	

Drilling Line Record: Size | Make | Serial No. | No. Lines | Trips | Ton Miles | Total Miles | Slip & Cut | Air Miles | Slip Date | Slip Time | Slip Depth

Time	Remarks	Start	Stop	Hrs.
	Rig Rig Down Move Drain	1:30	2:30	1
	Move Drain & [illegible]	2:30	12:30	2
	[illegible]	12:30		
	[illegible]		12:30	2

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Disposal Trips	Pipe Lock	Packing & Seal Inspected Daily
Model:				
Pipe Rams:				
Blind Rams:				

O RING ON KIT Ø Spare Operated [illegible] Hrs.

Control a Hydr. Chk. #

Rig Service Chk. #

Daily Check Chk. #

Pick Tester Chk. #

Fuel on Hand (U.O.) a.m. gals.

Fuel Rec. in Today (gals) gals.

TOTAL gals.

Fuel on Hand (U.O.) p.m. (Midnight) gals.

FUEL USED gals.

TO HR. USED DAY CUM.

PUMP DESIGN H.P. P.M.

CEMENT RETURNS (YES, NO)

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER Ø

DRILL PIPE	Size	Wt.	CLASSIFICATION 2	3	4	TOTAL	Date Broken	Hr. Broken (Hour Number)	Taken to Service	CALIPER DATE	RESULTS	FROM PIPE RACK

Total Contract Time HRS.

Total Contractor's Time HRS.

Approved by Operator's Representative

Approved by Toolpusher

VSW 200-1

CONSERVATION BOARD COPY

№ 1395 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. [illegible] LOCATION [illegible] LSD ___ SEC ___ TWP ___ RGE ___ W ___ DATE [illegible] 19__

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

REMARKS	START	STOP	HRS.
[illegible]	[illegible]		
[illegible]			
[illegible]			
[illegible]		[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE

REMARKS	START	STOP	HRS.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE [illegible]

REMARKS	START	STOP	HRS.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		
[illegible]			
[illegible]		[illegible]	[illegible]

FIRES ___ DRILLER'S SIGNATURE

EQUIPMENT CHANGES

B.O.P.

Hydril

Pipe Rams

Blind Rams

O RING ON KIT # ___

Fuel on Hand 12:01 a.m.

TOTAL

Fuel on Hand 11:59 p.m.

FUEL USED

CEMENT RETURNS

DAYS FROM SPUD [illegible]

Approved by Operator's Representative [illegible]

Approved by Toolpusher [illegible]

HSW DDL-1 CONSERVATION BOARD COPY

№ 1394 HSW

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESREN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

FUEL USED

DRILL PIPE | SIZE | CLASSIFICATION | TOTAL | CALIPER DATE | RESULTS | HIGH PIPE RACK

NEW DDL-1

CONSERVATION BOARD COPY

№ 1393

VERY - VERY - VERY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM DRLG

FUEL USED

DRILL PIPE

CLASSIFICATION

CALIPER DATE

RESULTS

Approved by Operator's Representative

Approved by Toolpusher

NEW DBL-1

CONSERVATION BOARD COPY

No. 1392 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO ____ LOCATION ____ SEC ____ TWP ____ RGE ____ W ____ DATE ____ 19__

DRILLING POINT ____ MILES MOVED ____ ROAD CONDITIONS ____

REMARKS	TIME START	TIME STOP	HRS
Mix Cement in mud Tank	12:30	12:30	½
Start to pump cement - Rig pump picked up - could not get suction on Drilling Mud	12:30	12:30	1
Take down Pump & clean out. Put in cellar - Cut off pipe in cellar			
Clean out from mud tanks	12:00		6½
Mixed 50 sks Neat cement followed up 2% CaCl2 Pumped 2 bbl of CaCl2 ahead 17% Cal			
FIRES Dehydrator Plug — DRILLER'S SIGNATURE			
Cleaning cement out of pump	8:00		
Pressure manifold			
Put 8 5/8 pipe down to test for cement at bottom of 9 7/8 hole			
Take down pumps to get out cement		4:00	8
FIRES — DRILLER'S SIGNATURE			
Cleaned out T + Po Thing Tog & Tech	4:00		
Suction + pressure manifold		8:00	4
Cleaning cement out of Feed pump	8:00		
		12:00	4
FIRES — DRILLER'S SIGNATURE			

B.O.P. ____ EQUIPMENT CHANGES ____ TRANSFER #

DAYS FROM SPUD ____ TOTAL CONTRACT TIME ____ HRS. TOTAL CONTRACTOR'S TIME ____ HRS.

DRILL PIPE ____ CONSERVATION 1 2 3 4 ____ Approved by Operator's Representative ____ Approved by Toolpusher ____

NSW 006-1

CONSERVATION BOARD COPY

№ 1391 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. DATE

HAULING POINT MILES MOVED ROAD CONDITIONS

DRILL COLLARS

BITS

PUMP

MOTOR HOURS

MUD: WEIGHT, VISCOSITY, GEL

ADDITIVES: GENERAL:

REMARKS

TIME: START, STOP, DEPTH

FIRES

DRILLER'S SIGNATURE

B.O.P.

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE | SIZE | GRADE | CLASSIFICATION 1 2 3 | TOTAL | CALIPER DATE | REMARKS | FROM PIPE MILL

CASING REPORT

FUEL USED

HSW 500-1

CONSERVATION BOARD COPY

No. 1390 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESRERN)

DAILY DRILLING LOG

RIG NO. ______ LOCATION ______ SEC ______ TWP ______ RGE ______ W ______ DATE Feb 12 ______ 19__

DIRECTIONS TO WELL ______ DRILLING POINT ______ MILES MOVED ______ ROAD CONDITIONS ______

MIDNIGHT TO 8 AM TOUR

REMARKS	START	STOP	HRS.
Add Drill Pipe & make Casing	1200	1345	1¾
Pick up 5½ CSG & wash out	1345	1615	2½
Clean & Circ Tight Spots	1615	0100	[illegible]
@ 300'.			
Pick up 7" casing & cont.	0100	0145	¾
Rig Repairing	0145	1200	[illegible]

FIRES ______ DRILLER'S SIGNATURE

8 AM TO 4 PM TOUR

REMARKS	START	STOP	HRS.
Run 7" CSG wash, ream	1200		
& circulate casing in.		1245	¾
Clean to bottom & pick up	1245		
landing joint		300	2¼
Circulate 7" casing for csg. down	300	400	1
Ran 13 jts 7" K-S 20# csg.			
w/Shoe @ 402 KB Guide shoe on bottom			
& baffle collar on top of first joint			

FIRES ______ DRILLER'S SIGNATURE

4 PM TO MIDNIGHT TOUR

From 406

REMARKS	START	STOP	HRS.
Circulate CSG under	400		
Working on pumps & cleaning		1200	8
mud tanks			

FIRES ______ DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD 11

FUEL USED

Approved by Operator's Representative

Approved by Toolpusher

HSW DDL-1

CONSERVATION BOARD COPY

Nº 1389 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LAS SEC TWP RGE W DATE 19

MAILING POINT MILES MOVED ROAD CONDITIONS

TIME	REMARKS	TIME
	MIX SALT & WT. MATERIAL TO 12# ppg	12 00
	CIRCULATE – PUMP 4 STANDS	4 30
	REAM FILL FROM 180'	6 00
		8 00

FIRES

DRILLER'S SIGNATURE

TIME	REMARKS	TIME
	WORKING PIPE & TRYING TO CLEAN HOLE WHILE WORKING ON PUMPS	8 00
		11 00

FIRES

DRILLER'S SIGNATURE

TIME	REMARKS	TIME
	CIRCULATE – UNABLE TO CLEAN HOLE	4 00
		6 30
	PULL OUT WITH DRILL STRING	6 30
	HOLE TAKING 310# @ 180'	9 00
	RUN CSG. – HOLE UP @ 180'	9 00
	CIRCULATE & ROTATE CSG. TO CLEAN UP HOLE	10 30
		11 00

FIRES

DRILLER'S SIGNATURE

B.O.P.	Tested	Required Time	Kind	Size	Rating & Bolt Tightening Data
Blind					
Pipe Rams					
Blind Rams					

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER 2

DATE FROM SPUD

TOTAL CONTRACTOR'S TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	3	4	TOTAL	Date Spotted	Ft. Drilled Since Spotted	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

NEW DGL-1

CONSERVATION BOARD COPY

N° 1388 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

BIG NO. LOCATION LOT SEC TWP RGE W DATE

MILES MOVED ROAD CONDITIONS

MAILING POINT

REMARKS	TIME START	TIME STOP	HRS
TRIP IN WITH 2" CASING	12.00	4.00	4
ATTEMPT TO WORK CASING	4.00	8.00	4
PULL THAT SPLIT AT 260'			

FIRES — DRILLER'S SIGNATURE

WORK CASING IN LIGHT DUTY	8.00	9.00	1
PULL OUT WITH CASING - WET	9.00	1.00	4
BEGIN SHERWOOD DRILL	1.00	2.30	1½
TRIP IN WITH BIT TO REAM	2.30	4.00	1½

FIRES — DRILLER'S SIGNATURE

TRIP IN WITH BIT	6.00	6.15	¼
CIRCULATE & REAM FILL	6.15	7.45	1½
RIG SERVICE	7.45	8.00	¼
REAM TO BOTTOM	8.00	9.00	1
WITTLE FILL ON BAILER			
MIX MUD & CIRCULATE	9.00	11.00	2

FIRES — DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD: 9

TOTAL COMPANY TIME HRS — TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1387 RSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT

MILES MOVED ROAD CONDITIONS

MIDNIGHT TO 8 A.M. TOUR

Footage 40.1

Bits	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom or Total	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	Gr.

Drill Collars: No. O.D. I.D. Length Wt. per Ft. Total Wt. Per Ft. Total Length Kelly

	12 m.	2 a.m.	4 a.m.	6 a.m.	Pump	12 m.	2 a.m.	4 a.m.	6 a.m.	Pump	12 m.	2 a.m.	4 a.m.	6 a.m.	Motor Hours
Weight					No. 1					No. 2					
Viscosity					Model					Model					
Gel															

W.L. P.H. pH Deflector Mud Cir. Flow Flow

Additives: General:

Bottom Line Record	Line	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear		Bit Miles	Bit Hrs.	Bit Cost	Bit Life at Depth

Remarks

	Time Start	Time Stop	Hours
Run 7" casing	12:00	03:00	3
Circ & work casing to 270	03:00	07:45	4¾
Rig Service	07:45	08:00	¼

Fires Driller's Signature

8 A.M. TO 4 P.M. TOUR

Footage 40.1

Bits	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom or Total	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	Gr.

Drill Collars: No. O.D. I.D. Length Wt. per Ft. Total Wt. Per Ft. Total Length Kelly

	8 a.m.	10 a.m.	12 noon	2 p.m.	Pump	8 a.m.	10 a.m.	12 noon	2 p.m.	Pump	8 a.m.	10 a.m.	12 noon	2 p.m.	Motor Hours
Weight					No. 1					No. 2					
Viscosity					Model					Model					
Gel															

W.L. P.H. pH Deflector Mud Cir. Flow Flow

Additives: General:

Bottom Line Record	Line	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear		Bit Miles	Bit Hrs.	Bit Cost	Bit Life at Depth

Remarks

	Time Start	Time Stop	Hours
Rise & work casing to 360'	8:00	10:15	2¼
Drop out casing - cut	10:45	2:30	4¾
Drop on work rod and break circulation & wash down 360'	2:30		
		4:00	1½

Fires Driller's Signature

4 P.M. TO MIDNIGHT TOUR

Footage 40.1

Bits	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom or Total	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	Gr.

Drill Collars: No. O.D. I.D. Length Wt. per Ft. Total Wt. Per Ft. Total Length Kelly

	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Pump	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Pump	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Motor Hours
Weight			10.1		No. 1					No. 2					
Viscosity			195		Model					Model					
Gel															

W.L. P.H. pH 7.0 Deflector Mud Cir. Flow Flow

Additives: 15 sacks Zeogile General:

Bottom Line Record	Line	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Wear		Bit Miles	Bit Hrs.	Bit Cost	Bit Life at Depth

Remarks

	Time Start	Time Stop	Hours
Run & clean to bottom - ream	4:00	5:30	1½
Mix mud pill & circulate around rods.	5:30	7:30	1
Start out with rods.	7:30	8:00	½
Repair power swivel	10:00	10:15	¼
Trip out with rods.	10:15	12:00	1¾

Fires Driller's Signature

B.O.P.	Footage	Elapsed Time	Pump Pressure	Pump Strokes & Size	Connect to Start Time	Pump on Mains (3 P.H.)	Drill Motor	Date	To	Hours
Model					Rig Service Time	Pump No. 2 (Idle) (min)				
Fuel Burn					Mobilization Time	TOTAL				
Drill Pipe					Pump Repair Time	Pump on Mains (1 P.H.) (min)				

Equipment Changes Transfer #

Days from Spud: 8

Total Contract Time: Total Contractor's Time:

Approved by Operator's Representative

Approved by Toolpusher

Drill Pipe	Line	Make	Classification 3	1	4	Total	Date Added	Pr. Drilled (since Added)	Total Pr. Drilled	Calibrer Date	Results	Where Pipe Back

Fuel Used

Cement Returns

Remarks

Form DDL-1

CONSERVATION BOARD COPY

№ 1386 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. W. DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS	TIME START	TIME STOP	HRS.
Drill 8¾" Hole	12:00	12:15	¼
Repair mud line	12:15	12:45	½
Drill 8¾ Hole	12:45	08:30	3½
Circ & Condition Hole	08:30	09:15	¾
Drilling Trip & take Sample	09:15	11:15	2
Circ & Condition Hole to	11:15		
Run 7" Casing		08:00	½
Cement			
Cut			
FIRES			

DRILLER'S SIGNATURE

REMARKS	TIME START	TIME STOP	HRS.
Circ & Condition Hole	08:00	08:45	¾
Take Survey	8:45	9:15	½
Trip out Hole light	9:15	11:00	1¾
Lay down Sample & run to bottom	11:00	11:30	½
Ream tight Hole	11:30	4:00	4½
FIRES			

DRILLER'S SIGNATURE

REMARKS	TIME START	TIME STOP	HRS.
Ream tight hole	4:00	4:30	½
Trip out	4:30	8:00	3½
Lay down 6" collars & Sub	8:00	10:00	2
Rig to run 7" Casing	10:00	10:30	½
Run 7" Casing	10:30	12:00	1½
FIRES			

DRILLER'S SIGNATURE

B.O.P. Tested Required Pipe Free Joint Working & Spare Inspected Date

Rig Serial No. Tag #

Rotary Clock Tag #

Rig Engine Tag #

TOTAL

FUEL USED

TOO BIND ON BIT #

Bit Removed 2-21

DRILL PIPE Size Joints CLASSIFICATION 2 3 4 TOTAL Date Received Hr. Drilled Since Received Total Hr. Drilled CALIPER DATE RESULTS HIGH PIPE FACE

EQUIPMENT CHANGES TRANSFER #

DATE FROM SPUD 7

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

FORM DDL-1

CONSERVATION BOARD COPY

№ 1385 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS NO.

WELL

RIG NO. LOCATION SEC. TWP. RGE. W. DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

Depth	Footage	To	No. of Bottom	Bit Size	Type	Drill Collars	Remarks	Time Start	Time Stop	Hours
214	114	328	6							

Bits	No.	Size	Type	Serial No.	Wgt.	R.P.M.	Bottom of Circle	No.	Nozzles	Pump No.	Pump Pressure	Total Hours	I	D	G
	2	8 3/4	HSR	5 3 7 2 2	10	75	151	14		1 10 / 2 10					

	1	2	3	4		1	2	3	4		1	2	3	4	Mud Additives
Wt. Cont.	8	8		8	Mud					Mud					
Viscosity	32	32		32	Water					Water					
Oil															

Wt. F.C. pH 8 Resistivity Meas. Cir. 8 Cl. Flow Cl. Flow

Additives: General:

Drilling Line Record	Size	Make	Serial No.	No. Strands	Trips	Total Miles	Total Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles

Fires: Driller's Signature:

Depth	Footage	To	No. of Bottom	Bit Size	Type	Drill Collars	Remarks	Time Start	Time Stop	Hours
327	30	357	7	13		8 / 6 / 5	Passed: Gas Compressor Check Gas	18:00	5:00	1
							Drill 8 3/4" Hole	9:00	4:00	7

Bits	No.	Size	Type	Serial No.	Wgt.	R.P.M.	Bottom of Circle	No.	Nozzles	Pump No.	Pump Pressure	Total Hours	I	D	G
	2	8 3/4	HSR	5 3 7 2 2	10	75	151	14	—			10			

	1	2	3	4		1	2	3	4		1	2	3	4	Mud Additives
Wt. Cont.	9.9	10.1	10.9	10.1	Mud		12.5			Mud		12.5			
Viscosity	52	150	160	160	Water		180			Water		5000			
Oil							3 1/2 & 6 1/2					2 1/2 & 3			

Wt. F.C. pH 7.0 Resistivity Meas. Cir. 8 Cl. Flow Cl. Flow

Additives: General:

Drilling Line Record	Size	Make	Serial No.	No. Strands	Trips	Total Miles	Total Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles

Fires: Driller's Signature:

Depth	Footage	To	No. of Bottom	Bit Size	Type	Drill Collars	Remarks	Time Start	Time Stop	Hours
357	34	391	7 3/4	10		8 / 6 / 5	Drilling 8 3/4" Hole	4:00	7:45	3 3/4
							Rig Service	7:45	8:00	1/4
							Drill 8 3/4 Hole	8:00	12:00	4

Bits	No.	Size	Type	Serial No.	Wgt.	R.P.M.	Bottom of Circle	No.	Nozzles	Pump No.	Pump Pressure	Total Hours	I	D	G
	2	8 3/4	HSR	5 3 7 2 2	10	75	151	21	—			10			

	1	2	3	4		1	2	3	4		1	2	3	4	Mud Additives
Wt. Cont.	10.1	10.1	11.0	10.2	Mud		12.5			Mud		12.5			
Viscosity	100	95	102	59	Water		180			Water		5000			
Oil							3 1/2 & 6 1/2					2 1/2 & 3			

Wt. F.C. pH 7.0 Resistivity Meas. Cir. Cl. Flow Cl. Flow

Additives: General:

Drilling Line Record	Size	Make	Serial No.	No. Strands	Trips	Total Miles	Total Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles	Wear	Date	Cut	Slip Miles

Fires: Driller's Signature:

B.O.P.	Tested	Opened	Pressure	Pipe Rams & Blind Rams Tested
Blind				
Pipe Rams				
Blind Rams				

Below Operator 2-24 hrs.

Drill Time Chart #

Rig Repairs Chart #

Mud's Chart Chart #

Pump Stroke Chart #

Fuel on Hand 12:01 a.m.

Fuel Rec. & Trans. (gals)

TOTAL

Fuel on Hand 11:59 p.m.

FUEL USED

Equipment Changes: Driller's Signature: Transfer #

Days from Spud: 6

Total Contract Time: Total Contractor's Time:

Approved by Operator's Representative:

Approved by Tailpusher:

Drill Pipe	Size	Grade	Classification 2	3	4	Total	Date Delivered	Air Blown Drill Pipe Delivered	Taken Off Delivered	Tailpusher Date	Results	Drill Pipe Back

NEW DDL-2

CONSERVATION BOARD COPY

№ 1384 RSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION SEC. TWP. RGE. M. DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, STOP, HRS.

DRILL COLLARS

MOTOR HOURS

ADDITIVES GENERAL

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

CASING REPORT

TOTAL

FUEL USED

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CAUSE DAYS

RESULTS

FROM PRE-RACK

HSW 006-1

CONSERVATION BOARD COPY

№ 1383 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. 11-11 LOCATION LSD SEC TWP RGE W DATE

MAILING POINT EXPECTED POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START | STOP | HRS

FIRES

DRILLER'S SIGNATURE

B.O.P. | Tested | Pressure Test | Pipe Rams | Blind Rams

TOTAL

FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY TIME HRS | TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Date Setback	Date Pulled	CALIPER DATE	RESULTS	FROM PIPE RACK

FORM DDL-1

CONSERVATION BOARD COPY

No. 1352 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG No. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1381 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

START FINISH

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Pressure Test Pipe Rams Blind Rams

Pump on Hand Pump Rec'd Today TOTAL FUEL USED

Rig Service Kelly Check Fire Drills

TEST RING ON HIT

Bottom Operated

DRILL PIPE Size Jointer CLASSIFICATION TOTAL Date Delivered Caliper Date Results Inch Pipe Back

EQUIPMENT CHANGES DRILLER'S SIGNATURE TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1350 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

DIRECTIONS TO WELL

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS | TIME START | STOP | HRS.

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

B.O.P. | EQUIPMENT CHANGES | TRANSFER #

DRILL PIPE | CLASSIFICATION | CALIPER DATE | RESULTS | FROM PIPE DATE

DATE FROM SPUD | TOTAL COMPANY TIME | TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1379 HSW

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

RIG NO. 11 LOCATION DATE Feb 1 19 11

DIRECTIONAL WELL

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

DRILL COLLARS

REMARKS

TIME

WEIGHT

VISCOSITY

GEL

DESILTER

GENERAL

FIRES

DRILLER'S SIGNATURE

B.O.P.

FUEL USED

EQUIPMENT CHANGES

DRILL PIPE

CONSERVATION BOARD COPY

№ 1378 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS FOR WELL

RIG NO. 11-11 LOCATION CANADIAN DRILLING MIDLAND SEC. TWP. RGE. W. DATE Jan 31 19 7

MAILING POINT NORMAN WELLS SHIPPING POINT MILES MOVED ROAD CONDITIONS

Pipe	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	I.D. Fit	Fit up on Kelly

Bit No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hrs. at Cond.	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	S.P.M.	Tubes Torque	T.	B.	G.

	12 mn	2 a.m.	4 a.m.	6 a.m.		12 mn	2 a.m.	4 a.m.	6 a.m.		12 mn	2 a.m.	4 a.m.	6 a.m.	Mud Co. Change
WEIGHT					No. 1					No. 2					1
VISCOSITY					Make					Make					2
GEL															3
W.L.	P.C.	pH	DESILTER Mesh Dia.		C. Flow		D. Flow								4
ABSENTEE			GENERAL												5
															6
															Magnetic Tanks Water

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Cut	Air Miles	Date Slip or Cut	Hours Drlg.	Air Lift on Spool

REMARKS

	TIME START	TOP	HRS.
Lay down drill pipe Work out of the way Finish [illegible] Waiting for [illegible] to be [illegible] to drill well To spud in	12:00	6:00	8
FIRES Driller's Signature			
Rig up Hang pulley [illegible] To pick mud to [illegible] move	8:00	4:00	8
FIRES [illegible]			
[illegible]	8:00	16:00	
FIRES Driller's Signature			

Pipe	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	I.D. Fit	Fit up on Kelly

Bit No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bit Hrs. at Cond.	Hrs.	Recovered	Hrs.	Pump No.	Pump Pressure	S.P.M.	Tubes Torque	T.	B.	G.

	8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.		8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Co. Change
WEIGHT					No. 1					No. 2					1
VISCOSITY					Make					Make					2
GEL															3
W.L.	P.C.	pH	DESILTER Mesh Dia.		C. Flow		D. Flow								4
ABSENTEE			GENERAL												5
															6
															Magnetic Tanks Water

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Cut	Air Miles	Date Slip or Cut	Hours Drlg.	Air Lift on Spool

B.O.P.	Tested	Pressure Test	Rig Up	Pitching & Bear Inspected Date
Model				
Pipe Rams				
Blind Rams				

Fuel on Hand (2.31 a.m.)	gals.	
Fuel Rec. in Today (gals)	gals.	
TOTAL	gals.	
Fuel on Hand (8 p.m. today)	gals.	
FUEL USED	gals.	

Rig Number (Dia.)		
Mud Co. (Dia.)		
Rig Supply (Dia.)		

TD	FR. (DATE)	LAT	CAN
FLUID		FLUID DOWN	P.M.
COMMENT RETURNS	(YES - NO)		

EQUIPMENT CHANGES

DATE FROM SPUD

TOTAL CONTRACTOR TIME HRS. | TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Date Before	Yr. Scrap (Line Scrap)	Total Yr. Scrap	CALIPER DATE	RESULTS	FROM PIPE RACK

NEW DDL-1

HEAD OFFICE PAYROLL COPY

No. 1377 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: [illegible] Hwy [illegible] to 7

RIG NO. 11-11 LOCATION: Carnegie Al Unknown, Mid-Sub SEC. TWP. RGE. W. DATE: [illegible] 19[illegible]

DRILLING POINT: Nor Plan Wells

MILES MOVED: ROAD CONDITIONS:

REMARKS	TIME START	TIME STOP	HRS
[illegible]	12[illegible]	2[illegible]	9
Rig up — Power Swivel Make Chem Pit Well (Earth)	4[illegible]	12[illegible]	8

FIRES

DRILLER'S SIGNATURE

B.O.P. TEST

FUEL USED

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

HEAD OFFICE PAYROLL COPY

№ 1376 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL: LAT 63°52 59.5 LONG 124° 39 15.7

RIG NO. 11-11 LOCATION: CANADIAN DEVONIAN M41.8 LSD SEC TWP RGE W DATE JAN 24 19 71

DRILLING POINT: NORMAN WELLS

MILES MOVED

ROAD CONDITIONS

REMARKS	TIME START	TIME FINISH	HRS
Rig up	12.00	8.00	8
Pump manifolds			

FIRES

Rig up
Pump out conductor
Nibble Hosans cement

Hosans premium cement.

FIRES

DRILLER'S SIGNATURE

Rig up
Steam [illegible]
Pump
Hook up off with suction
+ pressure lines to manifolds

FIRES

B.O.P. Tested Required Today Pipe Size Packing & Seal Replacing Date

Make
Kind Make
Kind Size

Check a Valve Chk A
Rig Service Chk B
Kelly Cock Chk C
Pipe Rams Chk D

Fuel on Hand 12:01 a.m. USG
Fuel Rec. Today USG
TOTAL USG
Fuel on Hand 11:59 p.m. USG
FUEL USED USG

KW HR USED
CAMP RETURNS

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS

TOTAL CONTRACTOR'S TIME HRS

Approved by Operator's Representative

Approved by Toolpusher

FEED RING ON BIT #

Bottom Diameter 2-24 IN.

DRILL PIPE	Size	Grade	CLASS 1	2	3	TOTAL	Date Added	Ft. Drilled Since Bottom	Total Ft. Drilled	TALLYED DATE	REMARKS	FROM HOLE BACK

HEAD OFFICE PAYROLL COPY

HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION Canuck-et-al Dahadinni M 43 DATE Jan 28 1971

DIRECTIONS TO WELL LAT. 63°52'54.3 LONG 124°57' 14.1

MAILING POINT Norman Wells

MILES MOVED

ROAD CONDITIONS

REMARKS	START	STOP	HRS
Rig up. Lining up Mud Tanks + Pushing Together	12^{00}	8^{00}	8
FIRES			
Rig up Bolt Mud Tanks Together Work on Crown off Derrick (and raise platform) Steam [illegible] Mud Tanks	8^{00}	4^{00}	8
FIRES			
Steam & Thaw Mud Tanks Line up [illegible] pump Rig up.	4^{00}	12^{00}	8
FIRES			

L. Slonyon

EQUIPMENT CHANGES

2-24

Approved by Operator's Representative

Approved by Toolpusher

No 1349 HSW

HEAD OFFICE PAYROLL COPY

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL: LAT-63°-62-59.3" LONG. 124° M 57.9

MUD NO. 11-11 LOCATION: GANDER-ET-AL DARWIN-1 M43-8 SEC. TWP. RGE. W. DATE: JAN 27

MAILING POINT: NORMAN WELLS SHIPPING POINT: MILES MOVED: HEAD CONDITIONS:

	REMARKS	TIME START	TIME STOP	HRS
	Rigging up Wiring night Hooking up Rig Shack	12.00	5.00	6
	FIRES	DRILLER'S SIGNATURE		
	Rig up Steam Fitting (Work Heaters) Repair + Hang Derrick lights + Rig lights Crown Block up on Derrick	8.00	4.00	8
	FIRES	DRILLER'S SIGNATURE		
	Rig up wiring Rig Steam Fitting	4.00	12.00	8
	FIRES	DRILLER'S SIGNATURE		

EQUIPMENT CHANGES

TRANSFER #

Approved by Operator's Representative

Approved by Tangier

HEAD OFFICE PAYROLL COPY

№ 1918 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11

LOCATION CANDEL-Dakkan[illegible] et al Mills

DATE JAN 26 1971

WELL ZAL 65°-52 383 long 124°34 159

MAILING POINT Norman Wells

REMARKS	START	STOP	TOTAL
Rig up - TANK + ~~[illegible]~~ SHELTER	12.00	8.00	8
FIRES			
Rigging up Putting up Rig SHELTERS STEAM LINES	8.00	4.00	8
FIRES			
Rigging up Rig SHELTERS Steamfitting	4.00	12.00	8
FIRES			

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

DAYS FROM SPUD

Bits Operated 2-24

Approved by Operator's Representative

Approved by Toolpusher

HEAD OFFICE PAYROLL COPY

№ 1347 HSW

POOR COPY

May 3

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Diameter	Singles	Drill Collars
4175	20	4195	3½		7⅝	3	

Weight	9.0
Viscosity	40
Gel	

Desilter: Mud Clr. B

General: Drill Ahead

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Diameter	Singles	Drill Collars
4195	37	4232	6		7⅝	3	

Weight	9.5
Viscosity	38
Gel	

Desilter: Mud Clr. B

General: Drill Ahead

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Diameter	Singles	Drill Collars
4232	58	4290	5		7⅝	3	

Weight	9.5
Viscosity	40
Gel	

Desilter: Mud Clr. B

General: Drill Ahead

Remarks	Time Start	Time Finish	Total
Rig Chg	12:00	12:45	¾
Drlg	12:45	2:00	1¼
Cutting wire line Check	2:00		
Pull test		2:30	½
Fires	Driller's Signature		
Rig Chg	8:00	8:30	½
Drlg	8:30	12:30	4
Rig Chg	12:30	12:45	¼
Lunch Break	12:45	1:00	¼
Survey at 4160	1:00	1:30	½
Drlg	1:30	4:00	2½
Fires	Driller's Signature		
Drlg	4:00	5:00	1
Rig Chg	5:00	5:30	½
Drlg	5:30	8:15	2¾
Rig Chg	8:15	8:45	½
Drlg	8:45	9:30	¾
Rig Chg	9:30	10:00	½
Drlg	10:00	10:45	¾
Survey at 4250	10:45	11:30	¾
Tripping	11:30	11:45	¼
Rig Service	11:45	12:00	¼
Fires	Driller's Signature		

Equipment Changes

Transfer #

Days from Spud

Total Company Cost

Total Contractor's Cost

Approved by Contractor's Representative

Approved by Toolpusher

HSW 501-1 HEAD OFFICE PAYROLL COPY

№ 1796 HSW

POOR COPY

DAILY DRILLING LOG

May 2

REMARKS

FIRES

FIRES

FIRES

EQUIPMENT CHANGES

HEAD OFFICE PAYROLL COPY

№ 1795 HSW

POOR COPY

DAILY DRILLING LOG

RIG NO. 11

May 1

REMARKS

TIME		

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DAYS FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

HSW 006-1 HEAD OFFICE PAYROLL COPY

№ 1794 HSW

POOR COPY

April 30

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S.H.	Ft. up on Kelly
4330'	21	4416	5 ½		73	2									19

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Casing	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	L.	G.
1																	
2																	
3																	

	12 m.	2 a.m.	4 a.m.	6 a.m.	Mud Pumps	12 m.	2 a.m.	4 a.m.	6 a.m.	Mud Pumps	12 m.	2 a.m.	4 a.m.	6 a.m.	Mud Pumps	Hours Off Charge
WEIGHT				26	No. 1					No. 2						
VISCOSITY				50	MODEL					MODEL						
GEL																

W.L. F.C. pH DESILTER: Hours On: S. U. Flow: O. Flow: SURVEYS: Angle / Depth

ADDITIVES: GENERAL: Weather: Temp. Water: Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Cut	Air Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool

REMARKS

	TIME Was	Stop	Hrs.
Rig Crew	12:00	12:30	½
Drilling	12:30	1:30	1
Rig Crew	1:30	2:00	½
Drilling	2:00	5:45	3¾
Rig Crew	5:45	6:30	¾
Drilling	6:30	7:00	½
Rig Crew	7:00	8:00	1

FIRES: PHOTO

DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S.H.	Ft. up on Kelly
4411	26	4437	5 ½		73	3									22

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Casing	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	L.	G.
1																	
2																	
3																	

	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	Hours Off Charge
WEIGHT				10	No. 1					No. 2						
VISCOSITY				40	MODEL					MODEL						
GEL																

W.L. F.C. pH DESILTER: Hours On: U. Flow: O. Flow: SURVEYS: Angle / Depth

ADDITIVES: GENERAL: Weather: Temp. Water: Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Cut	Air Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool
10" Rock Field													

REMARKS

	TIME Was	Stop	Hrs.
Drilling	8:00	12:30	4½
Rig Crew	12:30	1:00	½
Repair Gas	1:00	1:30	½
Drilling	1:30	2:00	½
Rig Crew	2:00	2:30	½
Drilling	2:30	4:00	1½

FIRES: Co. Pressure Tester [illegible]

DRILLER'S SIGNATURE

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.S.H.	Ft. up on Kelly
4437	19	4456	1½												

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Casing	Hrs.	Received	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	L.	G.
1	[illegible]			[illegible]	[illegible]		176	[illegible]			2	175	[illegible]				
2							[illegible]										
3																	

	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	8 a.m.	10 a.m.	12 noon	2 p.m.	Mud Pumps	Hours Off Charge
WEIGHT					No. 1					No. 2						
VISCOSITY				40	MODEL					MODEL						
GEL																

W.L. F.C. pH DESILTER: Hours On: O. Flow: O. Flow: SURVEYS: Angle / Depth

ADDITIVES: GENERAL: Weather: Temp. Water: Bbls.

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Wear Slip	Cut	Air Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool
7" Rock Field													

REMARKS

	TIME Was	Stop	Hrs.
Drilling	4:00	5:45	1¾
Rig Crew	5:00	5:45	¾
Service	5:45	6:15	½
Drilling	6:15	7:00	¾
Rig Crew [illegible]	11:00	12:00	1
Repair	12:00	12:20	½
Hook to Mud Pump	12:20	12:40	½
Repair	12:40	12:50	½

FIRES: [illegible]

DRILLER'S SIGNATURE

S.O.P.	Tender	Finished Time	Run Left	Hooking & Unit Connected Date	Connection Chk. #	Fuel on Hand 12:01 a.m.	gals.	FUEL RECEIVED	gals.	EQUIPMENT CHANGES	TRANSFER #
Mud:					Rig Service Chk. #	Fuel Rec. Today (add)	gals.				
Pipe & Hrs.					Daily Check Chk. #	TOTAL	gals.	TO	RR USED	SOLD	CON.
Blind Rams:					Fuel Equip. Chk. #	Fuel on Hand 11:59 p.m. (amount)	gals.	PLUS	PLUS DOWN	R.R. F.W.	
						FUEL USED	gals.	CEMENT RETURNS - (YES/NO)			

DAYS FROM SPUD: TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Tool-pusher [illegible]

DRILL PIPE	Size	Joints	CLASSIFICATION 1	2	3	TOTAL	Date Delivered	Ft. Drilled since Delivery	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM PIPE RACK

NEW DOL-1 HEAD OFFICE PAYROLL COPY

№ 1793 NSW

POOR COPY

April 29

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Liners	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom
4174	7	4181			72	1									10

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Cored	No.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Tubes Plugged	T.	B.	G.
1	7 7/8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				2	[illegible]	[illegible]	[illegible]			

	12 m.	2 a.m.	4 a.m.	6 a.m.	Change	12 m.	2 p.m.	4 p.m.	6 p.m.	Change	12 m.	2 a.m.	4 a.m.	6 a.m.	Change	Total Oil Change
WEIGHT				9.1	No. 1					No. 1					1	
VISCOSITY				37	Model					Model					2	
GEL															3	

W.L. F.C. pH 7 DESILTER: Hours On 7 U. Flow O. Flow

ADDITIVES: GENERAL:

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Slip	Cut	Air Miles	Slip & Cut Date	Next Slip	Ft. Left on Spool

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Liners	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom
4174	29	4371	6		72	7									16

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Cored	No.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Tubes Plugged	T.	B.	G.
1	7 7/8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				2	[illegible]	[illegible]	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.	Change	8 a.m.	10 a.m.	12 noon	2 p.m.	Change	8 a.m.	10 a.m.	12 noon	2 p.m.	Change	Total Oil Change
WEIGHT				9.6	No. 1					No. 1				1.6	1	
VISCOSITY				37	Model					Model					2	
GEL															3	

W.L. F.C. pH 8 DESILTER: Hours On 7 U. Flow O. Flow

ADDITIVES: GENERAL:

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Slip	Cut	Air Miles	Slip & Cut Date	Next Slip	Ft. Left on Spool

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Strokes	Liners	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom
4371	24	4395	5 3/4		72										16

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Cored	No.	Recovered	No.	Pump No.	Pump Pressure	S.P.M.	Tubes Plugged	T.	B.	G.
1	7 7/8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				2	[illegible]	[illegible]	[illegible]			

	4 a.m.	6 a.m.	8 a.m.	10 a.m.	Change	12 m.	2 p.m.	4 p.m.	6 p.m.	Change	8 p.m.	10 p.m.	12 m.	2 a.m.	Change	Total Oil Change
WEIGHT		9.6											1.5		1	
VISCOSITY		37											[illegible]		2	
GEL													1.6		3	

W.L. F.C. pH 8 DESILTER: Hours On 7 U. Flow O. Flow

ADDITIVES: Flow Check GENERAL:

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Slip	Cut	Air Miles	Slip & Cut Date	Next Slip	Ft. Left on Spool

B.O.P.	Tested	Expired Date	Pipe Rams	Pipe Rams Inspection Date
Make:				
Pipe R. No.				
Blind Rams:				

CO RING ON BIT #: Bit Hours 2-24 Hrs.

Check a mark: Chk #:
Rig Repairs: Chk #:
Repair Cards: Chk #:
Rig Repair Cards: Chk #:

Fuel on Hand 12:01 a.m. gals.
Fuel Rec. & Tanker gals.
TOTAL gals.
Fuel on Hand 11:59 p.m. gals.
FUEL USED 78 gals.

TO	FR. USED	

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	TOTAL	Date Delivered	Ft. Drilled since Delivery	Total Ft. Drilled	CALIPER DATE	REMARKS	FROM PIPE DATE

REMARKS	TIME Start	Stop	Hrs.
Reaming Underreamer	[illegible]	[illegible]	[illegible]
Drilling	7:30	9:45	2
Rig Repair Cable	9:45	10:15	1/2
Drilling	10:15	2:45	4 1/2
Rig Service & Inspection	2:45	3:00	1/4

FIRES: 1 Dr. 1 Fr. DRILLER'S SIGNATURE

Drilling	3:00	11:00	8
Rig Repair	11:00	11:30	1/2
Drilling	11:30	1:00	1
Rig Repair	1:00	2:30	1 1/2
Drilling	2:30	3:45	1 1/4
Rig Service	3:45	4:00	1/4
Circulate Trip Out	3:00		

FIRES: DRILLER'S SIGNATURE

Rig Repair Cable	4:00	4:30	1/2
Drilling	4:30	5:30	1
Rig Repair Cable	5:30	5:45	1/4
Drilling	5:45	8:45	3
Rig Repair & Service	8:45	9:45	1
Drilling	9:45	11:30	1 3/4
Rig Repair Cable	11:30	11:45	1/4
Rig Service	11:45	12:00	1/4

FIRES: DRILLER'S SIGNATURE

EQUIPMENT CHANGES	TRANSFER #

DAYS FROM SPUD: 27

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

NEW DOL-1 HEAD OFFICE PAYROLL COPY

№ 1792 NSW

POOR COPY

APRIL 28

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. on Hole Daily
316															

Pump No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	S.P.M.	Stroke Length	No.	Reamers	No.	Power Unit	Pump Pressure	S.P.M.	Pump Output	T.	B.	Ft.
1	7-1/2	[illegible]		P.S.D. [illegible]													

	12 m.	2 a.m.	4 a.m.	6 a.m.	Circulating	12 m.	2 a.m.	4 a.m.	6 a.m.	Drilling	12 m.	2 a.m.	4 a.m.	6 a.m.	Operations Daily Summary	Hours Lost Or Delay
WEIGHT	9.4		9.4		No. 1					No. 2					1	
VISCOSITY	37		37		MODEL					MODEL					2	
GEL					STROKE LENGTH					STROKE LENGTH					3	
W.L.	F.C.	pH 7			DESILTER: Hours On 7			U. Flow		D. Flow					4	
ADDITIVES					GENERAL										5	
															Weather	Water
															Temp.	Mud

Driving Line Engine	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Fast Out	Fast In	Cut	All Miles	Slow Out	Slow In	Cut	Hours Drilling	Ft. Drilled on Same

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. on Hole Daily
316	6	322	1-1/4		71	4									1'

Pump No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	S.P.M.	Stroke Length	No.	Reamers	No.	Power Unit	Pump Pressure	S.P.M.	Pump Output	T.	B.	Ft.
1	7-1/2	[illegible]		P.S.D. [illegible]	[illegible]	[illegible]	42	24			2	[illegible]	[illegible]	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.	Circulating	8 a.m.	10 a.m.	12 noon	2 p.m.	Drilling	8 a.m.	10 a.m.	12 noon	2 p.m.	Operations Daily Summary	Hours Lost Or Delay
WEIGHT			9		No. 1					No. 2					1	
VISCOSITY			42		MODEL		Circulate			MODEL		Drilling			2	
GEL					STROKE LENGTH			72		STROKE LENGTH			72		3	
W.L.	F.C.	pH 9			DESILTER: Hours On 7			U. Flow		D. Flow					4	
ADDITIVES					GENERAL 1 - 10 ft Cutter [illegible]										5	
															Weather	Water
															Temp.	Mud

Driving Line Engine	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Fast Out	Fast In	Cut	All Miles	Slow Out	Slow In	Cut	Hours Drilling	Ft. Drilled on Same

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Pt.	Ft. on Hole Daily
322	12	334	3-1/2		72										14'

Pump No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	S.P.M.	Stroke Length	No.	Reamers	No.	Power Unit	Pump Pressure	S.P.M.	Pump Output	T.	B.	Ft.
1	7-1/2	[illegible]		P.S.D. [illegible]	[illegible]	[illegible]	[illegible]				2	[illegible]	[illegible]	[illegible]			

	8 a.m.	10 a.m.	12 noon	2 p.m.	Circulating	8 a.m.	10 a.m.	12 noon	2 p.m.	Drilling	8 a.m.	10 a.m.	12 noon	2 p.m.	Operations Daily Summary	Hours Lost Or Delay
WEIGHT			9.4		No. 1					No. 2					1	
VISCOSITY			37		MODEL		Circulate			MODEL		Drilling			2	
GEL					STROKE LENGTH			72		STROKE LENGTH			72		3	
W.L.	F.C.	pH 7			DESILTER: Hours On 7			U. Flow 7.9		D. Flow 7					4	
ADDITIVES					GENERAL										5	
															Weather	Water
															Temp.	Mud

Driving Line Engine	Size	Make	Serial No.	No. Lines	Trips	Test Miles	Total Miles	Fast Out	Fast In	Cut	All Miles	Slow Out	Slow In	Cut	Hours Drilling	Ft. Drilled on Same

B.O.P.	Tested	Expired Time	Kind	Packing & Seal Inspected Date	Crown-o-matic Chk. #	Fuel on Hand (2.01 a.m.)	gals.	MANDATORY	AM	PM	OLD	EQUIPMENT CHANGES	TRANSFER #
Make:					Kelly Bushing Chk. #	Fuel Rec. & Tested (noon)	gals.						
Size & No.					Kelly Cock Chk. #	TOTAL	gals.	NO.	NO. USED	AM	PM		
Drive Hole:					Fire Equip. Chk. #	Fuel on Hand (11:59 p.m. (midnight))	gals.	Fuel				DAYS FROM SPUD: 26	
O. RING ON BIT #		Drill Collars	4	No.		FUEL USED	gals.	Cement Returns: [illegible]					

DRILL PIPE	Size	Joints	CLASSIFICATION 2	3	4	NORMAL	Bore Gauge	Ft. Drilled since Gauge	Total Ft. Drilled	CALIPER DATE	RESULTS	FROM FIRE DATE

REMARKS	TIME Start	Stop	Hrs.
Rig Up	12 00	12	1/2
Trip out No circulating [illegible]	12 15	1 30	1 1/4
Wash Ream Trip in	1 30	4 00	2 1/2
Pick up Bit - Trip out	4 00	4 45	1/4
Repair Crown-O-Matic	4 45	6 30	1 3/4
Trip out	6 30	8 00	1 1/2
[illegible] off 29 ft off bottom			
FIXES	Driller's Signature		
Trip out with Bit		1 00	1 1/2
Pick Collars, pick up			
Drill [illegible]		1 30	1 1/2
Trip in		3 30	2 1/2
Circulate		3 45	1/4
Trip out for Core Barrel		4 45	1 1/4
Circulate			
6 [illegible]			
[illegible]			
FIXES	Driller's Signature		
Wash Tank & Clean [illegible]			
[illegible]			
Run Tank [illegible]			
Circulate			
(Rig [illegible] Equipment)			
(Waiting [illegible])			
FIXES	Driller's Signature		

Approved by Operator's Representative

Approved by Toolpusher

HEAD OFFICE PAYROLL COPY

№ 1791 HSW

POOR COPY

WELL: AT-65 52543-Long 124°34' 157 | MOVING FROM POINT: Non-plan Wells | MOVING TO POINT: | DATE: March 27

MILES MOVED: | ROAD CONDITIONS:

From	Footage	To	Hrs. on Bottom	Mt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom Rate
4309	5	4310	2¾		71	2						25.5	1		

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bearing or Series	No.	Reamed	No.	Nozzle No.	Pump Pressure	S.P.M.	Table Pressure	T.	B.	G.
1	7.0	96	WDS	258	W12261	150-2	120	28	100		2	125	240	1000			
2									100								
3									100								

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		Hour On Charge
Wt. Gel			70	70	No. 1		Cyclonic			No. 2					1	
Viscosity			36	36	Model		Tanks			Model					2	
Gel					Size					Size					3	
W.L.	F.C.	pH 9			Desilter: Hours On 9		G. Flow 91		G. Flow 70						4	
Additives:					General:										5	
															Weather	Water
															Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip & Cut	All Miles	Slip & Cut	Hour Slip	Ft. Cut on Slip

From	Footage	To	Hrs. on Bottom	Mt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom Rate
4310															

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bearing or Series	No.	Reamed	No.	Nozzle No.	Pump Pressure	S.P.M.	Table Pressure	T.	B.	G.
1																	
2																	
3																	

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		Hour On Charge
Wt. Gel			9		No. 1		Cyclonic			No. 2					1	
Viscosity			38		Model		Tanks			Model					2	
Gel					Size					Size					3	
W.L.	F.C.	pH 9			Desilter: Hours On 9		G. Flow								4	
Additives:					General:										5	
															Weather	Water
															Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip & Cut	All Miles	Slip & Cut	Hour Slip	Ft. Cut on Slip

From	Footage	To	Hrs. on Bottom	Mt. Drill Pipe	Stands	Singles	Drill Collars	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. on Bottom Rate
4310	6ob	4316	2		71	3						25.5	9		

No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bearing or Series	No.	Reamed	No.	Nozzle No.	Pump Pressure	S.P.M.	Table Pressure	T.	B.	G.
1	7.0	96	WDS	258	W12261	150-2	120	26-6	104		2	140	240	1500			
2																	
3																	

	12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		12 m.	2 a.m.	4 a.m.	6 a.m.		Hour On Charge
Wt. Gel			9		No. 1		Cyclonic			No. 2			140		1	
Viscosity			37		Model		Tanks			Model			240		2	
Gel					Size		Check mix			Size			48	48	3	
W.L.	F.C.	pH 9			Desilter: Hours On 9		G. Flow								4	
Additives: 16 Cyclonic mixing					General: 2 Sh. Sulphate 156 Non-Silica										5	
6 Sh. Caustic					2 Sh. Lignosulphate 2 Sh. Caustic											
2 Sh. Caustic					2 Sh. Quebracho Disperse Tank										Weather	Water
															Temp.	Mud

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip & Cut	All Miles	Slip & Cut	Hour Slip	Ft. Cut on Slip

D.O.P.	Terms	Expected Time	Rig Up	Reming & Trip Drilling Time	Check or Notes Chk. #
Mud					
Pipe & Tools					
Blind Rams					
2 Ring On Bit 2			Spud Date 9-24		Big Bit Chk. #
					Bit Chk. #
					Fire Fighter Chk. #

Fuel on Hand 12:01 a.m.	gals.
Fuel Rec. in Today (gal.)	gals.
TOTAL	gals.
Fuel on Hand 11:59 p.m. (Calculated)	gals.
FUEL USED	gals.

Drill Pipe	Size	Joints	Classification 2	3	4	Total	Date Delivered	Ft. Drilled since Delivered	Total Ft. Drilled	Caliper Gate	Remarks	Total Ft. Drill Pipe Rat'g

Remarks	Time Start	Time Stop	Hrs.
Rig Sec.	12 00	12 15	¼
Drilling ahead 4310	12 15	2 30	2¼
Tripping check bottom stab. Rig	2 30	5 00	2½
Fish [illegible] Shaking W Sample			
Fired	Driller's Signature		
Rig Sec.	8 00	8 15	¼
Trip out check every [illegible]	8 15	9 00	¾
Standing out for stabilizers	9 00	2 00	6
[illegible]			
[illegible]	3 00	4 00	1
[illegible]			
Fired	Driller's Signature		
Rig Sec.	4 00	4 15	¼
Trip out Stabilizers at 2 [illegible]	4 15	7 15	3
[illegible]			
Circulate for cutting	7 15	9 00	1¾
Drilling ahead	9 00	10 00	1
Ins Cyclonic Barrels	10 00	11 00	1
Trip out put [illegible]	11 00	12 00	1
Bordeaux			
[illegible]			
[illegible]			
Fired	Driller's Signature		

Equipment Changes	Transfer #

Days Work Drlg.	75

Total Lubricant Gals.	Total Lubricants Gals.
Approved by Operator's Representative	
Approved by Toolpusher	

NEW DOL-1 HEAD OFFICE PAYROLL COPY

№ 1790 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILLER'S SIGNATURE

B.O.P.

FUEL USED

CONSERVATION BOARD COPY

№ 1789 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION Cree & Sun Mesa SEC. ___ TWP. ___ RGE. ___ W DATE Aug 15 19__

DIRECTIONS Take 3/4 mile up the ridge

WELL Navajo Mesa

DRILLING POINT Navajo Mesa SUPPLY POINT

MILES MOVED ___ ROAD CONDITIONS ___

FROM	PACKAGE	TO	NO. OF SACKS	WT. BELT PULL	SPEED	ENGINE	DRILL COLLARS	NO.	O.D.	I.D.	LENGTH	AV. WT.	TOTAL WT.	TYPE OF JOINT
4292				37	71	2								8

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Core	No.	Reamer	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	S.	D.
BIT																		
REAMER																		
REAMER																		

	12 mn	2 a.m.	4 a.m.	6 a.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	12 mn	MOTOR HOURS	Total Hours Change
WEIGHT				9	No. 1					No. 1						1	
VISCOSITY				42	No. 2					No. 2						2	
OIL																3	
W.L.	F.C.	pH		8	DESILTER Hours On	8	G. Flow	7	D. Flow	70	DESANDER					4	

ADDITIVES: GENERAL:

10 lbs Cow Tech (lost other one)

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Point	Size	Cut	Air Miles	Total Miles	Weather	Temp.	Wind	Time Lost

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Core	No.	Reamer	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	S.	D.
BIT	300	4½	[illegible]	35/8	[illegible]													
REAMER																		
REAMER																		

	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	12 mn	PUMP	2 a.m.	4 a.m.	6 a.m.	8 a.m.	MOTOR HOURS	Total Hours Change
WEIGHT					No. 1						No. 1					1	
VISCOSITY					No. 2						No. 2					2	
OIL																3	
W.L.	F.C.	pH			DESILTER Hours On	9	G. Flow	7	D. Flow	7	DESANDER					4	

ADDITIVES: GENERAL:

6 sks Salt

2 sks [illegible] Soda Ash

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Point	Size	Cut	Air Miles	Total Miles	Weather	Temp.	Wind	Time Lost

	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Bottom of Core	No.	Reamer	No.	Pump No.	Pump Pressure	S.P.M.	Pump Output	T.	S.	D.
BIT	300	4½	[illegible]	35/8	[illegible]	[illegible]	140	8	2¾									
REAMER																		
REAMER																		

	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	12 mn	PUMP	2 a.m.	4 a.m.	6 a.m.	8 a.m.	MOTOR HOURS	Total Hours Change
WEIGHT	37		8½		No. 1						No. 1					1	
VISCOSITY	42				No. 2						No. 2					2	
OIL																3	
W.L.	F.C.	pH	7		DESILTER Hours On	9	G. Flow	7	D. Flow	7	DESANDER					4	

ADDITIVES: GENERAL:

2 Gal Lime Conditioner

Driving Line Record	Size	Make	Serial No.	No. Lines	Trips	Turn Miles	Total Miles	Point	Size	Cut	Air Miles	Total Miles	Weather	Temp.	Wind	Time Lost

REMARKS	TIME START	TIME STOP	TOTAL
Rig Sun	12 00	12	½
Trouble at [illegible]	[illegible]	[illegible]	1½
Replace [illegible]	[illegible]	2	½
No [illegible]			
Trip in	[illegible]	[illegible]	[illegible]
Ream [illegible]	[illegible]	[illegible]	[illegible]
Circulate [illegible]		7	2
Trip out			½
FIRES	DRILLER'S SIGNATURE		
Trip out	12	12	½
Trouble out	[illegible]	10	2½
[illegible]	[illegible]	11	1
Trouble in [illegible]	11	1	1½
[illegible] on [illegible]	[illegible]	[illegible]	[illegible]
Trouble in [illegible]	[illegible]	[illegible]	1½
Circulate & [illegible]	[illegible]	[illegible]	½
Over Time for [illegible]			
FIRES	DRILLER'S SIGNATURE		
[illegible]	[illegible]	[illegible]	½
Drilling [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Recond Circ	[illegible]	[illegible]	[illegible]
FIRES	DRILLER'S SIGNATURE		

B.O.P.	Tested	Expired Time	Pipe Line	Rotating & B.O.P. Inspection Date
Main				
Pipe Rams				
Blind Rams				
NOTICE RING ON BIT 2		Bottom Discovered 2-24		

Casing & Liner Size at ___ Cmt at ___ Kelly Cock Size ___ Kelly Bushing Size ___ Kelly Cock Size ___ Fire Stop Size ___

Fuel on Hand 3,000 gal. ___ Fuel Rec. & Taken (gal) ___ TOTAL ___ Fuel on Hand 27 gal. ___ FUEL USED ___

Bank ___ Rig ___ Rig ___ Bank ___ FUEL RECEIVED ___ FUEL RETURNED ___ A.P. ___ P.P. ___

EQUIPMENT CHANGES ___ TRANSFER 2 ___

DATE FROM SPUD ___

TOTAL COMPANY FEET ___ TOTAL CONTRACTOR'S FEET ___

Approved by Operator's Representative ___

Approved by Toolpusher ___

DRILL PIPE	Size	Weight	CLASSIFICATION 2	3	4	TOTAL	Rule Setting	R. Closed Chok Setting	Choke No.	Choke Size	Choke	Choke Pressure

CONSERVATION BOARD COPY

№ 1788 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIME

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1787 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1780 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

CONSERVATION BOARD COPY

№ 1785 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. [illegible] LOCATION [illegible] SEC. ___ TWP. ___ RGE. ___ W. ___ DATE April 21 1981

DIRECTIONS TO WELL [illegible] MAILING POINT [illegible] SHIPPING POINT ___ MILES MOVED ___ ROAD CONDITIONS ___

From	Footage	To	No. of Bottom	Wt. Drill Pipe	Stands	Singles
4184	23	4207	72	56	69	4
4207	6	4213	24	[illegible]	70	14
4213	13.9	4221	13	[illegible]	70	1

REMARKS	TIME START	STOP	TOTAL
[illegible]			

FIRES

DRILLER'S SIGNATURE

1-10 FT lower Barrel
2 Mud Gauges

12 FT outer Core Barrel Complete
15 FT inner Barrel Complete

1-20 FT lower Barrel

B.O.P.

FUEL USED

TOTAL

EQUIPMENT CHANGES

DAYS FROM SPUD 22

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1784 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION DATE

MOVING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1783 HSW

From	Footage	To	No. of Bits	Hours Drilled	Drill Collars	Drill Pipe	Remarks	Start	Finish	Hrs.
4057	45	4014	6	32½	68		Drilling - HCO	10	1	15
							RC Core - Chase Inc. Barrel Tr	1	2	1
							Drilling - HCO	2	4	2½
							RC Core - Chase Inc. Barrel Tr	4	5	1
							Drilling - HCO	5	8	2½

Weight 9 9 9 — Viscosity 40 42 43 — Gel — Mud 14 — Filtrate 10 — Chlorides — Solids 4 — Sand — Alkalinity — Additives: 15 gal Cut Mate — Control: Mud 14 — Weather — Temp. — Driving Line Record: Size — Make — Serial No. — No. Lines — Type — Total Miles — Total Miles — Start — Finish — Hours — Miles Per Gal. — Miles Per Hour

Fixes: Driller's Signature: [illegible]

From	Footage	To	No. of Bits	Hours Drilled	Drill Collars	Drill Pipe	Remarks	Start	Finish	Hrs.
4014	41	4140	5¾	3½	68	3	Drilling - HCO	8	8	4
							RC Core - Chase Inc. Barrel Tr	8	9	1
							Drilling - HCO	9	12	3
							RC Core - Chase Inc. Barrel Tr	12	1	1½
							Drilling - HCO	1	4	2½
							Changed Bits - Ran Core Barrel - Drill 2 Joints to Target			
							Circulate - Pump Sweep out hole (Cut Mud)			

Weight 9 9.2 9 — Viscosity 40 40 51 — Gel — Mud 14 — Filtrate 9 — Chlorides — Solids 4 — Sand — Alkalinity — Additives: 15 gal Cut Mate, 1 Bag Mica — Control: Mud 14 — Weather — Temp. — Driving Line Record: Size — Make — Serial No. — No. Lines — Type — Total Miles — Total Miles — Start — Finish — Hours — Miles Per Gal. — Miles Per Hour

Fixes: Driller's Signature: [illegible]

From	Footage	To	No. of Bits	Hours Drilled	Drill Collars	Drill Pipe	Remarks	Start	Finish	Hrs.
4140	33	4173	5¾	3½	67	2	Lapping	11	1	2
							RC Core - 3 Tools Lapping Bit	1	2	1
							Drilling - HCO	2	7	5
							RC Core	7	7	½
							Safety - Circular	7	9	2
							Drilling - HCO	9	11	3
							Rig - Cert	11	12	1

Weight 10 11 — Viscosity 38 45 — Gel — Mud 14 — Filtrate 10 — Chlorides — Solids 4 — Sand — Alkalinity — Additives: Gel - 10 Cut Mate — Control: Mud 14 — Weather — Temp. — Driving Line Record: Size — Make — Serial No. — No. Lines — Type — Total Miles — Total Miles — Start — Finish — Hours — Miles Per Gal. — Miles Per Hour

Fixes: Driller's Signature: [illegible]

B.O.P.	Tested	Opened Tubs	Pulls with	Recovery & Total Footage Dr.	Consumed Water Cu. ft.	Fuel on Hand (2:01 a.m.)	Man Hours	Equipment Changes	Transfer #
Shaker					Rig Service Cu. ft.	Fuel Rec. & Today (gals)	TOTAL		
Pipe S. Ins.	✓		1585		Mixing Cu. ft.	TOTAL			
Blind Rams	✓		1248		Fuel Cu. ft.	Fuel on Hand (11:59 p.m. (Gals))	FUEL USED		
Casing on Int.		Spud Date/Time 1.2A	Hrs.					Days from Spud: 71	

Drill Pipe	Size	Joints	Classification 1	2	3	Total	Bore Bottom	In Bottom when Serviced	Total Ft. Drilled	Caliper Date	Results	Pipe Pull Back

Total Company Time — Total Contractor's Time

Approved by Operator's Representative

Approved by Toolpusher

NEW DRILL — HEAD OFFICE PAYROLL COPY — № 1782 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LEG SEC TWP RGE W DATE LOG

DIRECTIONS TO / S WELL MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

B.O.P.

FUEL USED

CONSERVATION

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1781 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

LOCATION

LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT

RIGS MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DATE FROM WORK

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CALIPER DATA

CONSERVATION BOARD COPY

№ 1781 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER O

DATE FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

FUEL USED

CONSERVATION BOARD COPY

№ 1780 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DIRECTIONS TO WELL

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Tested Expected Time Run Date Pulling & Test Inspection Date

Model

Fire Bolts

Blind Rams

NEED RING ON RIT #

Date Received

Casing in Hole Ch. #

Big Ten in Ch. #

Rotary Cart Ch. #

Kelly Cart Ch. #

Fuel on Hand (3:00 a.m.)

Fuel Rec'd Today (Gals)

TOTAL

Fuel on Hand (11:59 p.m.)

FUEL USED

FUEL DOWN A.M. P.M.

COMING RETURNING

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD: 74

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Grade	CLASSIFICATION 2	1	A	TOTAL	Date Delivered	Number Delivered	Number Returned	CALIPER DATE	RESULTS	FROM FIRE RACK

CONSERVATION BOARD COPY

№ 1779 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

FUEL USED

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1775 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD DISTANCE

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

S.O.P.

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SPUD

TOTAL COMPANY FUEL

TOTAL CONTRACTOR'S FUEL

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE | SIZE | WEIGHT | CLASSIFICATION 1 2 3 | TOTAL | STATE NUMBER | IN SERVICE (HOUR SERVICE) | SERIAL NO. OF TUBES | CALIPER DATE | RESULTS | HIGH FIRE RACK

CONSERVATION BOARD COPY

№ 1777 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. LOCATION LSD SEC TWP RGE W DATE 19

DIRECTIONS TO WELL

MOVING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START STOP TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

FUEL USED

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1776 HSW

POOR COPY

12

MILES MOVED | ROAD CONDITIONS

REMARKS | TIME

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

FIRES | DRILLER'S SIGNATURE

EQUIPMENT CHANGES

DRILL COLLARS

TOTAL

FUEL USED

DAYS FROM SPUD 76

TOTAL COMPANY TIME | TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

DRILL PIPE | CALIPER DATA | RESULTS | FROM-TO

HSW 006-1 HEAD OFFICE PAYROLL COPY

№ 1750 HSW

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-A LOCATION LOD SEC TWP RGE W DATE 19

WELL NO. MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, STOP

FIDES

DRILLER'S SIGNATURE

FIDES

DRILLER'S SIGNATURE

FIDES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

B.O.P.

TOTAL

FUEL USED

DAYS FROM SPUD

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

CLASSIFICATION

CALIPER DATA

RESULTS

FROM PIPE RACK

CONSERVATION BOARD COPY

№ 1749 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
WEEKEND 20
WELL

REMARKS

FIRES

DRILLER'S SIGNATURE

CONSERVATION BOARD COPY

№ 1748 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS

WELL

RIG NO. LOCATION LEO SEC TWP RGE W DATE

HAULING POINT WORKING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

BOP

FUEL USED

EQUIPMENT CHANGES

DATE FROM SPUD

Approved by Operator's Representative

Approved by Tallyman

CONSERVATION BOARD COPY

№ 1717 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

REMARKS

TIMES

DRILLER'S SIGNATURE

FIRES

B.O.P.

FUEL USED

CONSERVATION BOARD COPY

№ 1746

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION LEASE

WELL

MAILING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

DATE

REMARKS

TIME

START | STOP | TOTAL

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER

DAYS FROM SPUD

TOTAL COMPANY TIME

TOTAL CONTRACTOR TIME

Approved by Operator's Representative

Approved by Toolpusher

FUEL USED

CALIPER DATA

CONSERVATION BOARD COPY

No 1745

POOR COPY

HEATH & SHERWOOD DRILLING WESTERN

DAILY DRILLING LOG

REMARKS

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

CONSERVATION BOARD COPY

№ 1744 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION

DIRECTIONAL WELL

DRILLING POINT

WILES MOVED

ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P.

FUEL USED

EQUIPMENT CHANGES

TOTAL COMPANY TIME

TOTAL CONTRACTOR'S TIME

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1743 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

WELL

LOCATION

DATE

ROAD CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

FIRES

EQUIPMENT CHANGES

TOTAL

FUEL USED

CONSERVATION BOARD COPY

№ 1742 NSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONS TO / WELL

WAITING POINT

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

REMARKS

TIME

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

B.O.P.

TOTAL

FUEL USED

EQUIPMENT CHANGES

DRILL PIPE

CLASSIFICATION

CALIPER DATE

Approved by Operator's Representative

Approved by Testpusher

CONSERVATION BOARD COPY

№ 1741 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

RIG NO. 11-11 LOCATION LAS SEC TWP RGE W DATE

DIRECTIONS TO WELL

HAULING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FOOTPRINT CHANGES

DATE FROM SPUD

TOTAL COMPANY FUEL

TOTAL CONTRACTOR'S FUEL

Approved by Operator's Representative

Approved by Toolpusher

CONSERVATION BOARD COPY

№ 1740 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG

DIRECTIONAL WELL

RIG NO. LOCATION LAT. SEC. TWP. RGE. W. DATE 19

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

EQUIPMENT CHANGES

TRANSFER #

DATE FROM SHUB

TOTAL COMPANY TIME HRS.

TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

FUEL USED

CONSERVATION BOARD COPY

№ 1739 HSW

POOR COPY

HEATH & SHERWOOD DRILLING (WESTERN)

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO. LOCATION LSD SEC TWP RGE W DATE

DRILLING POINT SUPERVISOR POINT MILES MOVED ROAD CONDITIONS

REMARKS

TIME: START, STOP, HRS.

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

FIRES

DRILLER'S SIGNATURE

B.O.P. Series Pressure Test Make Size Serial No. Rotating Head Inspection Date

Fuel on Hand 3:00 a.m. TOTAL Fuel Used FUEL USED

EQUIPMENT CHANGES

TRANSFER #

DAYS FROM SPUD

TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.

Approved by Operator's Representative

Approved by Toolpusher

DRILL PIPE	Size	Joint	CLASSIFICATION 1	2	3	NOTES	Make Bottom	In Stripper Joint Bottom	Type of Stripper	CALIPER DATE	RESULTS	FROM THIS RACK

CONSERVATION BOARD COPY

№ 1725 HSW