Drilling Authority No. 540

Date Issued 18-10-71

WELL NAME ..... Amoco CDR A-1 Cranswick C-12

FIELD ..... Area: .....

LOCATION: Unit ..... C ..... Section ..... 12 ..... Grid .. 65-40 -- 131-45 .....

Latitude ..... 65-31-4.8 ..... Longitude .. 131-48-7.2 .....

U.W.L.R. .... 65.51800 — 131.80200 .....

U.W.I. ..... 300C126540131450Ø .....

Rig Release Date: .. 28-03-72 .....

Status .... D + A .....

Information Release Date .. 28-03-74 .....

CHANGE OF NAME:

DATE RECEIVED		INDEX
27-9-71	AK	Application for a Drilling Authority.
22-11-72	RK	Well Completion Data.
22-11-72	RK	Well History Report.
		Application to Amend a Drilling Authority.
14-02-72	RK	Application to change a Well Name.
18-05-72		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.
0		Well Inspection Report.
05-03-72	AK	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.....

IAND 52-90 (3-69)

DATE RECEIVED

LOGS:

Name	Run No.	Type	Interval
FDC	1-2		
DIL	1-5		
SNP	1-2		
BHC-S			
Dipmeter	1-2		

ANALYSES:

Sample	Lab. No.	Formation	Interval

A.O.F. Potential	Formation	Interval	MC.F.D.	Test Date

DRILL STEM TESTS:

No.	Formation	Interval

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

OIL AND GAS DIVISION
DIVISION DU PÉTROLE ET DES MINÉRAUX

WELL COMPLETION DATA
RENSEIGNEMENTS SUR LES FORAGES

Drilling Authority No. 540
N° de l'autorisation de forage

Date Issued Oct 18, 1971
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*
Amoco PCP A-1 Cranswick A-22	6195	

(Permittee, License, Lessee) — *(Détenteur de permis ou de licence, du concessionnaire)*	Exploratory Licence No. — *N° de licence de sondage*
Amoco Canada Petroleum, Canadian Pacific Oil&Gas	
(Operator) — *(Exécutant)*	Exploratory Licence No. — *N° de licence de sondage*
Amoco Canada Petroleum Company Limited	

LOCATION — *EMPLACEMENT*

Unit — *Unité*	Section	Grid — *Étendue quadrillée*	Latitude	Longitude
A	22	65-40-E, 131-45	65°31'01"N	131°48'55"W

Unique Well Identifier — *Code d'ordinateur*	Universal Well Location Reference — *Références universelles d'emplacement du puits*
300A226540131450	Lat. 65.51695°N, Long. 131.81527°W

	Date	Depth — *Profondeur*
Spudded — *Début des travaux*	Jan 25/72	
Suspended — *Suspension des travaux*		
Resumed Operations — *Reprise des travaux*		
Finished Drilling — *Forage terminé*	Mar/22/72	9413' KB
Deepened — *Approfondissement*		
Complete (Gas/Oil) — *Achèvement (Gaz/Pétrole)*		
Abandoned — *Abandon*	Mar 28/72	
Rig Released — *Fin des travaux*	Mar 28/72	

Pool(s) — *Gisement(s)*

Interval(s) Open to Production — *Intervalle(s) de production*: None

OIL AND GAS DIVISION
JUN 5 1972
INUVIK, N.W.T.

Elevation: Gr. — *Altitude du sol*: 2500' K.B. — *du carré d'entraînement*: 2521'

Rig No. — *N° de la tour de forage*: 31

Drilling Contractor — *Entrepreneur en forage*: Peter Bawden Drilling Services

Contractor's Business Licence No. — *N° du permis de l'entrepreneur*:

CASING RECORD — *TUBAGE*

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. 32			30'	27' KB	32 (Permafrost+2%$CaCl_2$)
2. 13 3/8	K-55	68#	24 joints	1025' KB	670 (Permafrost) 350 (Neat)
3. 9 5/8	N-80 LT&C	43.5#	95 joints	3990'	200 (Neat) ~~952 (Neat+8%Gel+0.03%HR7)~~ 300 (Neat)
4.					
5.					
6.					

Geological Tops — *Sommet des formations*	Elevation — *Profondeur* Depths — *Sous le niveau du sol*	Sub-Sea — *Sous le niveau de la mer*
Glacial Drift	Spud	
Cretaceous	224' KB	
Mississippian	453'	
Devonian Imperial	730'	
Canol	3547'	
Hume	3850'	
Headless	4076'	
Landry	4317'	
Mt. Kindle	6767'	
Cherty Unit	7843'	
Cambrian Quartzite	9396'	

Core Record — *Carottes*

From — *de*	To — *à*	Rec. — *Récupérées*	From — *de*	To — *à*	Rec. — *Récup.*
4000	4060	60'			
4060	4098	22'			
6046	6103	47'			
6862	6882	17'			

Log Record — *Diagrammes*

Run — *Série*	Type of Log — *Genre de diagramme*	From — *De*	To — *À*
2/3/72	BHC Sonic - Caliper	1024	Surface
2/3/72	D.I.L.	1020	50
2/21/72	BHC Sonic	3887	1025
2/21/72	D.I.L.	3882	1025
2/21/72	SNP	3888	1025
2/21/72	HDT	3884	1027
2/21/72	FDC	3888	1025
2/21/72	Dipmeter	3884	1027
3/19/72	BHC Sonic - Caliper	8875	3986
3/19/72	Formation Density	8875	3986
3/19/72	SNP	8875	3986
3/19/72	D.I.L.	8867	3986
3/19/72	Dipmeter	8868	3986
3/23/72	D.I.L.	9402	3986
3/23/72	BHC Sonic - Caliper	9406	7000
2/22/72	D.I.L.	3882	3981
2/22/72	B.H.C. - S	3887	3986

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
CONSERVATION ENGINEER
MAY 29 1972
YELLOWKNIFE, N.W.T.
NORTHERN ECONOMIC DEVELOPMENT BRANCH

CEMENTING RECORD (Plug, Squeeze, etc.) *CIMENTATION (Bouchon, sous pression, etc.)*				PERFORATING RECORD (Bullet, Jet) *PERFORATION (à balles, à jet)*				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*
	9413	8800	350 sxs neat - no feel				None				None
	7800	7550	118 sxs neat - felt								
	4040	3940	92 sxs neat - felt @	3880							
	surface	plug	5 sxs								

DRILL STEM TESTS – *ESSAIS AUX TIGES*

No. – *N°*	Date	Formation	From – *de*	To – *à*	V.O. Mins. *Vanne ouverte (minutes)*	I.S.I. Mins. *Première obturation (minutes)*	F.S.I. Mins. *Obturation définitive (minutes)*	I.S.I.B.H.P. *Pression de fond à la 1re obturation*	F.S.I.B.H.P. *Pression de fond à l'obturation définitive*	I.F.B.H.P. *Pression de fond au jaillissement*	F.F.B.H.P. *Pression de fond à l'écoulement définitif*	L.H.P. *Pression hydrostatique de début*	F.H.P. *Pression hydrostatique définitif*	Remarks – *Remarques*
1	3/24/72	Cherty Unit	8462	9411										Misrun
2	3/25/72	Mt. Kindle	7240	7550										Misrun
3	3/26/72	Mt. Kindle	7260	7605										Misrun

ANALYSIS – *ANALYSE*

Lab. No. / *N° de laboratoire*	Sample *Echantillon*	From – *de*	To – *à*	Source	Remarks – *Remarques*
None					
10094 DST #1					Misrun
#2					"
#3					"
933-2438					Mud Filtrate Analysis

PRESENT STATUS OF WELL
ETAT ACTUEL DU PUITS

Oil *Pétrole*		(Interval) *(Intervalle)*
Gas *Gaz*		(Interval) *(Intervalle)*
Dry *Sec*	X	
Susp. *Travaux sus.*		

Company *Société* Amoco Canada Petroleum Company Ltd.

Signed by *Signé par* [signature]

Title *Titre* Area Superintendent

Date May 25, 1972

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

Présenter les formules remplies à l'ingénieur en conservation du dist

CANADA

Drilling Authority No. 540

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

RECEIVED DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT OIL & MINERAL DIVISION MAY 18 1972 CALGARY 21, ALBERTA Exploration Engineer Yukon & N.W.T.

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 Amoco PCP A-1 Cyamerick A-22

Location: Unit A Section 22 Grid 65-40-131-45

Latitude 65°31'01" Longitude 131°48'55"

From Established Reference Marker

Universal Well Location Reference Lat. 65.51695°N., Long. 131.81527°W

Permit No. 6195 Lease No. N/A

Amoco, Canadian Pacific Oil & Gas
(Permittee, Licencee, Lessee)

Date of commencement of proposed program March 24, 1972

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at Nil

Gas at Nil

Water at Nil

Total Depth 9413 ft. Date of last operations March 28, 1972

Present condition of well Abandoned

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. 32" refrigerated	pipe	1 joint	27'	~~Initially 62 sx permafrost cement plus 2%~~ CaCl2. Recemented ~~137~~ 200, 150 & 220 sxs	
2.				permafrost cement plus 2% CaCl2	
3. 13 3/8"	68#	24 joints	1025'	~~670 sxs permafrost cement and 350 sxs neat~~ plus 100 sxs down annulus.	
4. 9 5/8"	43.5#	95 joints	3990'	~~500 sxs neat — 492 sxs neat plus~~ 8% gel + 0.03 HR7 Tail 300 sxs neat.	
5.					

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	9413 - 8800	~~Cherty Unit &~~ Cambrian Quartzite	~~350 sxs~~ Neat 110 sxs	No fool
2	7800 - 7550	Mt. Kindle	Neat ~~92 sxs~~	Felt
3	4040 - 3940	Bums	Neat	Felt
4	surface plug	Glacial Drift	5 sx	

The following logs have been run BHC Sonic-Caliper, D.I.L., S.N.P., H.D.T., F.D.C. & Dipmeter

Other operations proposed

Operations to be carried out by Peter Bawden Drilling Contractor Licence No. 0150

Address Address

Responsible Agent in field J. Carstairs

Dated at Grande Prairie, this 16 Day of May 19 72

Signed by [signature] Company Amoco Canada Petroleum Company Ltd.

Title Area Superintendent Operator's Exploratory Licence No. 1431

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:

Confirming oral approval given by Mr. G. E. Blue on the 28th March 1972, including welding on a plate and installing a well marker.

Dated May 18, 19 72

[signature]
District Conservation Engineer

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

IAND 52-90-5 (7-71)

Voir au verso

Drilling Authority No. 540

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

OIL AND MINERAL DIVISION

Application to Amend a Drilling Authority

This application, in triplicate, must be submitted and approved before commencing operations. If the well location is changed, this application must be accompanied where required, with a plan of survey approved by the Surveyor General.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. 540, concerning

Amoco CDR A-1 Cranswick C-12
(Name and Number of Well)

To change the well name and location as follows:

Name & Number of well - Amoco PCP A-1 Cranswick A-22

Location: Unit A, Section 22, Grid 65-40-131-45

Latitude 65°31'01"N, Longitude 131°48'55"

Reasons for the amendments: Location was moved 2010 feet west and 690 feet south from the original proposed location as the proposed site was too low and located too close to the creek bed and Central Del Rio Oils name change to Pan Canadian.

Dated at Grande Prairie, this 7th day of February, 19 72

Signed by ORIGINAL SIGNED BY: A. F. HOLAN

Title Area Foreman

Company Amoco Canada Petroleum Co. Ltd.

(For Oil and Mineral Division use only)

APPROVED

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

UNIVERSAL WELL LOCATION REFERENCE: Lat. 65.51695° N., Long. 131.81527° W.

UNIQUE WELL IDENTIFIER: 300A226540131450

Date February 14, 19 72

District Conservation Engineer

Forms to be submitted to the District Conservation Engineer, Department of Indian Affairs and Northern Development.

IAND 52-90-3 (8-71)

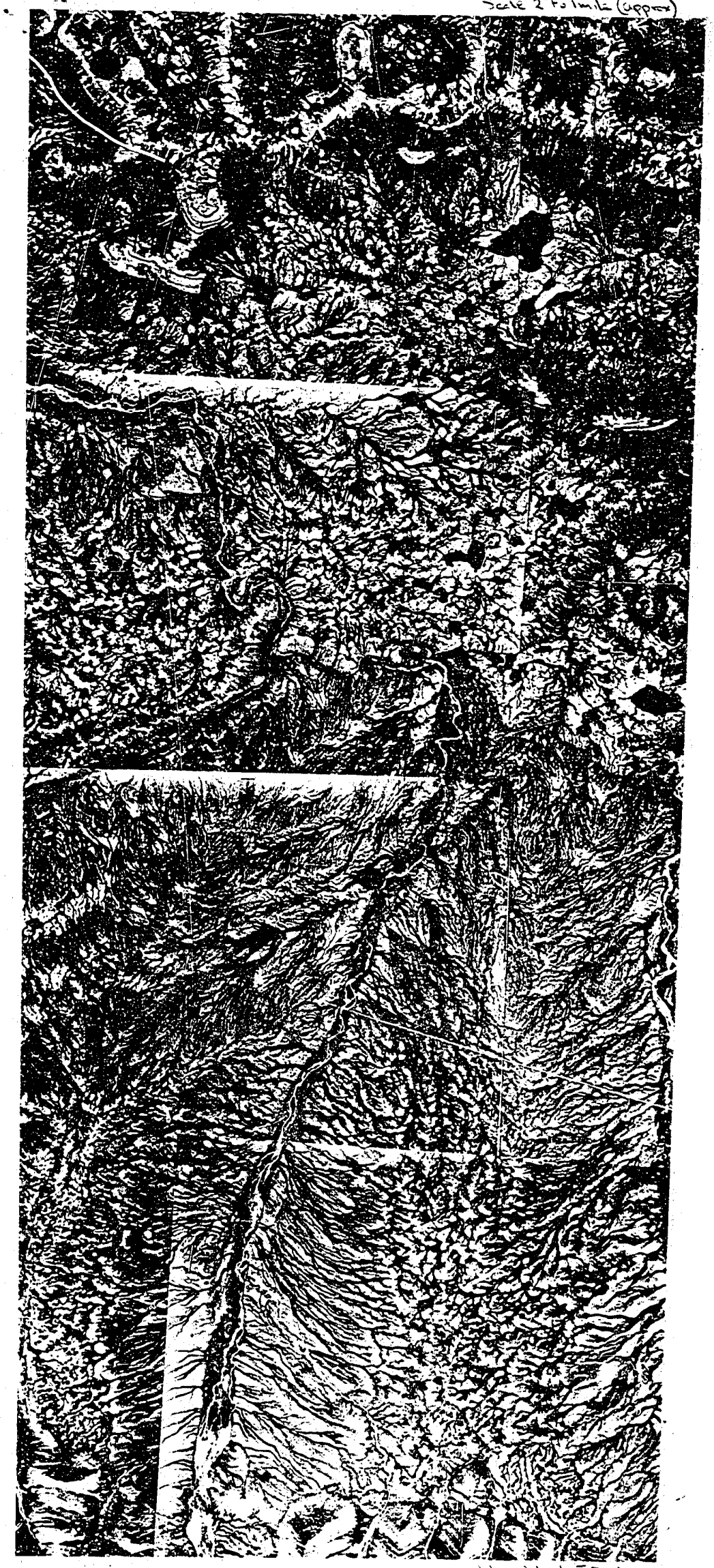
DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
CONSERVATION ENGINEER
FEB - 9 1972
YELLOWKNIFE, N.W.T.

N.W.T. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
OIL AND GAS DIVISION
FEB 14 1972
CALGARY 21, ALBERTA
OIL CONSERVATION ENGINEER
Northwest Territories & Yukon Territory

KODAK SAFETY FILM

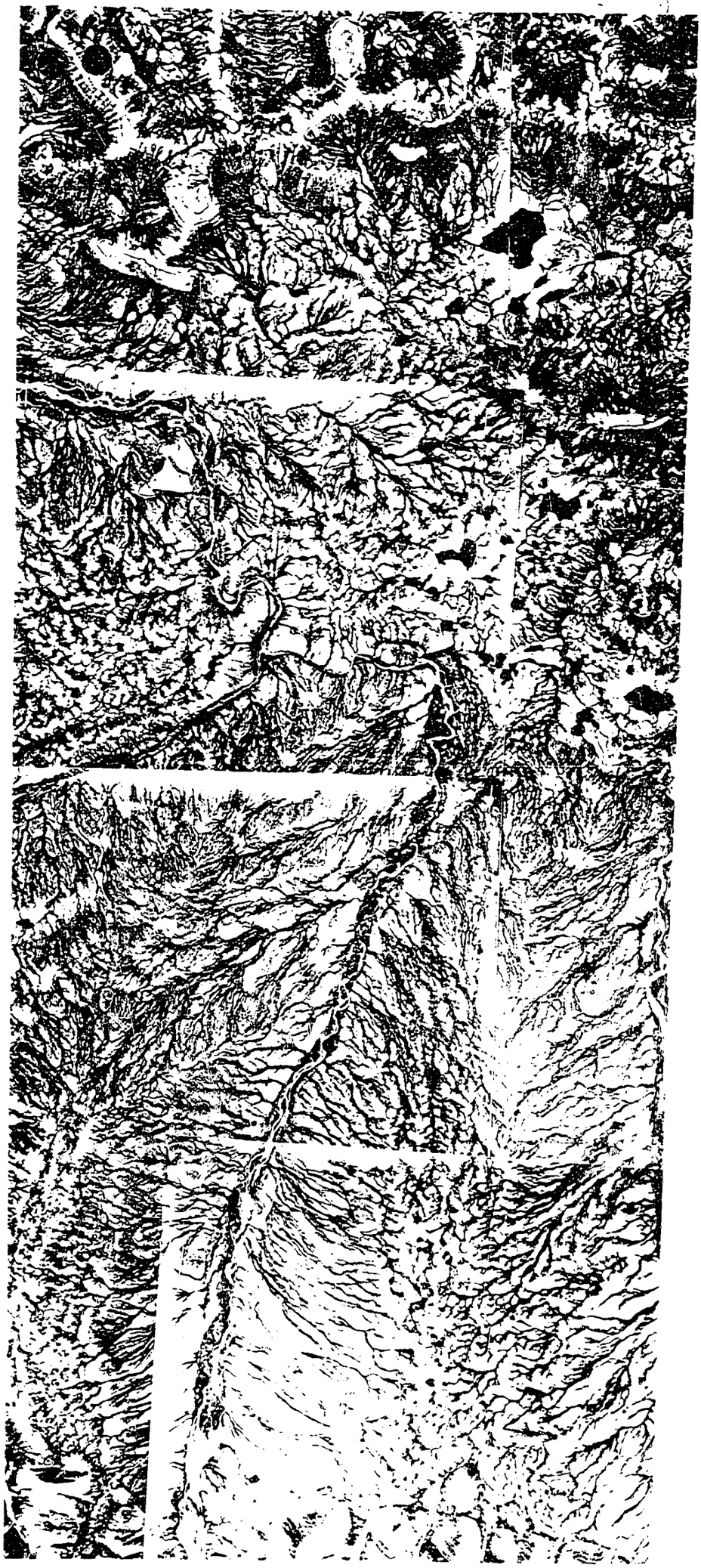
Portion of 1066 G 12
Scale 2" to 1 mile (approx)

N



Interpretation J J Murphy
H Davis
C U Burgham
Jan 71

LOCATION C.D.R



Drilling Authority No. ...540.....
Project No. .....

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
OIL & MINERAL DIVISION
SEP 27 1971
CALGARY, ALBERTA
CONSERVATION ENGINEER
NORTHWEST TERRITORIES & YUKON TERRITORY

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 . . Amoco CDR A-1 Cranswick C-12 .....

Location: Unit .....C..... Section .....12..... Grid 65-40 - 131-45 .....
Latitude . . 65°31'4.8" ..... Longitude ..... 131°48'7.2" .....
Unique Well Identifier .....
Universal Well Location Reference. . Lat. 65.51800°N., 131.80200°W. .....

Elevation: Ground . . . 2500 ..... K.B. .... 2521 ..... feet above sea-level.
Well is expected to produce from . Mount Kindle & Franklin Mtn. ..... formation at a depth of about . . 6430 & 7400 ..... feet. Expected total final depth . 10,000 feet (Cambrian) . .
Area assigned to well .....
(for District Conservation Engineer's use only)

.....
Permit No. . . . 6195 ..... Lease No. ..... N/A ..... Acreage ..... 52,982 .....
Permittee, licensee, or lessee . . Amoco, Canadian Pacific Oil and Gas Ltd. .....
Explanatory Licence No. ..... 1431 . & . 1925 . . .
Surface owned by Crown .....
(If alienated submit name and address of owner and occupant.)

Petroleum and natural gas rights owned by . . . Crown .....
We propose to use the following strings of casing, either cementing or landing them as indicated below:—

Casing Size O.D. (Inches)	Weight (Lb./Ft.)	Grade	New or Used	Estimated Depth	Sacks of Cement
1.					
2.		SEE ATTACHMENT			
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment. . . Mount Kindle & Franklin Mtn. (Oil and or Gas) .....
Drilling Mud & Blowout Preventors .....
1 Hydril and 1 Double Gate Schaffer Hydril with Remote Control .....
Well will be drilled with Rotary Rig No. . . 31 ..... by . Peter Bawden Drilling Services Ltd. . .
(Drilling Contractor or company)

.....

Responsible agent of applicant:— Contractor's Business Licence No. ..... 0150 .....
At well. . . A.F. Holan ..... At registered office. . . A.F. Holan .....
Address . 9916A - Richmond Avenue, Grande Prairie, Alta. Address . 9916A - Richmond Avenue, Grande Prairie, Alberta
It is understood that if changes become necessary, notice of the change of plan will be submitted.
Dated at Grande Prairie ....., this . . . 15. ..... day of . . . . September 19 71
Signed by . . . J.F. Holan ..... Company . Amoco Canada Petroleum Company Ltd.
Title ..... Area Foreman ..... Operator's Licence No. ..... 1431 .....

(For Oil and Mineral Division use only)

APPROVED

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

.....
..... PLEASE SEE ATTACHED SHEET WITH THE CONDITIONS OF APPROVAL .....
.....
Dated. . . . . October 18 ..... 19 . . 71 ..... W.D. Thomas .....
District Conservation Engineer

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

IAND 52-90-1 (7-71)

Voir au verso

Casing Size O.D. (Inches)	Weight (Lb/Ft.)	Grade	New or Used	Estimated Depth	Sacks of Cement
20	94	H-40	New	0 - 600	To Surface
13-3/8	68	K-55	New	0 - 1500	To Surface
9-5/8	43	N-80	New	0 - 453	As Required
9-5/8	40	N-80	New	453 - 4053	As Required
9-5/8	43.5	N-80	New	4053 - 5500	As Required
7	26	S00-95	New	0 - 40	As Required
7	23	S00-95	New	40 - 5633	As Required
7	26	S00-95	New	5633 - 10,000	As Required

CONDITIONS OF APPROVAL FOR DRILLING AUTHORITY NO. 540
FOR AMOCO CDR A-1 CRANSWICK C-12

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 Tuesday of each week/~~daily~~, the latest reports 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.

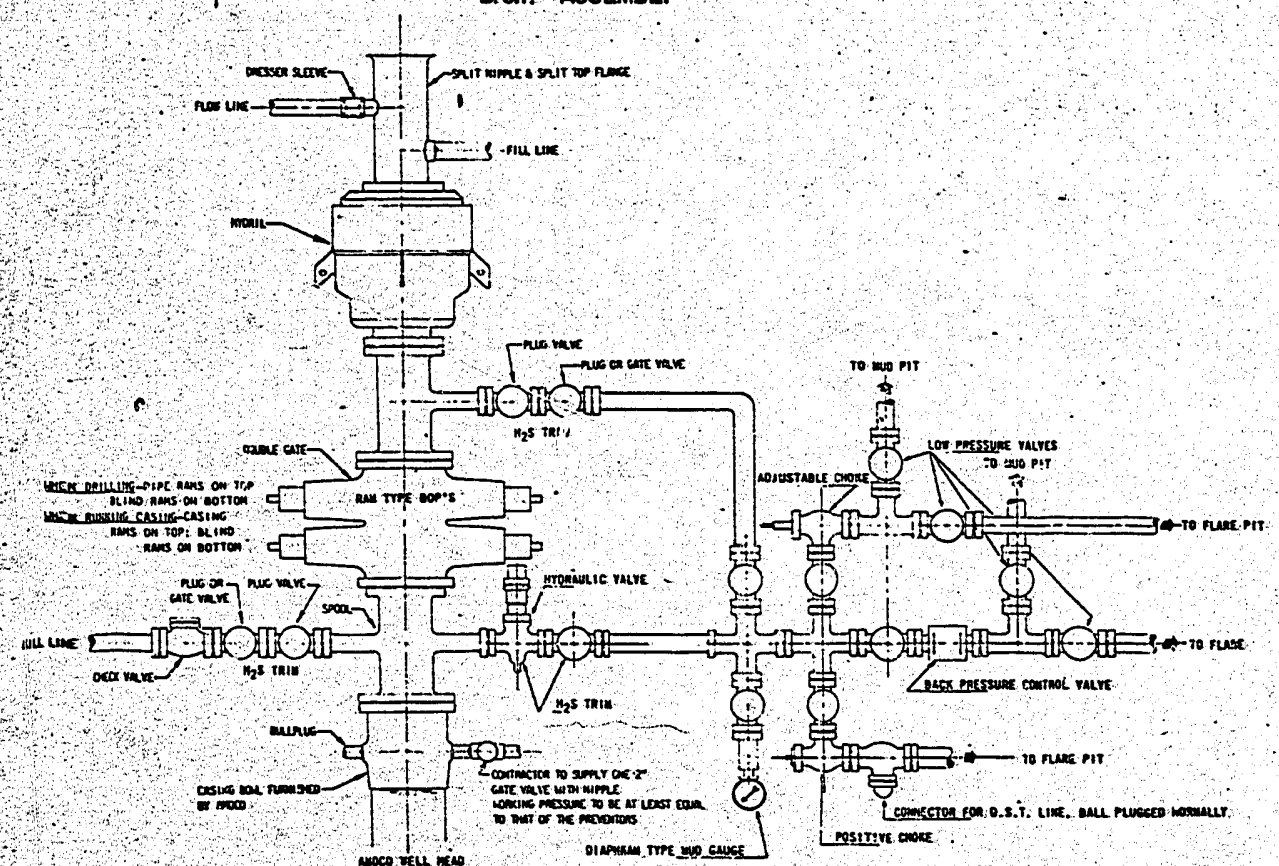
5. Any additional strings of casing must be approved by the District Conservation Engineer prior to running.

Maurice D. Thomas

M. D. Thomas
District Conservation Engineer
District 2

AMOCO CANADA
PETROLEUM COMPANY LTD.

B.O.P. ASSEMBLY



NOTES:

1. PREVENTORS TO BE HYDRAULICALLY OPERATED WITH AN ACCUMULATOR CAPABLE OF CLOSING, OPENING AND CLOSING TO THE MYDRIL AND PIPE RAMS WITHOUT RECHARGING. BOTH FLOOR AND REMOTE CONTROLS ARE REQUIRED.
2. ALL EQUIPMENT COMPRISING THE BOP STACK MUST BE NO SMALLER THAN THE ID OF THE CASING BEING DRILLED THROUGH. DRILLING NIPPLE TO BE AS LARGE AS THE ID OF THE BOP STACK.
3. (A) NO SCREWED CONNECTIONS MAY BE USED UPSTREAM FROM THE CHOKES.
   (B) NO SCREWED CONNECTIONS MAY BE USED ON OR DOWNSTREAM FROM THE CHECK VALVE ON THE KILL LINE
4. A KELLY COCK MUST BE USED ON THE KELLY.
5. A BELOW KELLY SAFETY VALVE IN USE IS TO BE USED BETWEEN THE KELLY SAVER SUB AND KELLY AND IS TO HAVE AN ID EQUAL TO OR LARGER THAN THE ID OF THE DRILL COLLARS IN USE.
6. AN OMSCO OR EQUIVALENT DRILL PIPE SAFETY VALVE WITH PROPER CONNECTIONS MUST BE ON THE RIG FLOOR AT ALL TIMES AND IS TO HAVE AN ID EQUAL TO OR LARGER THAN THE ID OF THE DRILL COLLARS IN USE.
7. KILL LINE MUST BE 2" OR LARGER AND MUST CONNECT TO THE PUMP MANIFOLD. KILL LINE IS NOT TO BE USED AS FILL LINE.
8. LINE FROM BOP STACK TO CHOKE MANIFOLD MUST BE 2" OR LARGER AND SHOULD BE AS STRAIGHT AS PRACTICAL. LINE MUST NOT CONTAIN MORE THAN TWO BENDS, NOR ANY BENDS OVER 45°. BENDS MUST HAVE A RADIUS OF CURVATURE NOT LESS THAN 12". LINE MUST NOT CONTAIN ANY WELDS WITHIN 12" OF THE DOWNSTREAM END AND 6" OF THE UPSTREAM END OF ANY BENDS. THIS EXTENSION LINE MUST BE SHOP MADE AND TESTED TO THE TEST PRESSURE OF THE MANIFOLD.
9. EQUIPMENT MENTIONED IN ITEMS 4 TO 7 MUST BE OF WORKING PRESSURE AT LEAST EQUAL TO THE WORKING PRESSURE OF THE PREVENTORS.
10. TWO 2" DIAMETER OR LARGER AND ONE 2-7/8" OR LARGER BLEED-OFF LINES MUST BE INSTALLED WITHOUT ANGULAR BENDS FROM CHOKES TO FLARE PIT; LINES TO BE SECURELY STAKED DOWN.
11. A DIAPHRAM TYPE MUD PRESSURE GAUGE IS REQUIRED FOR THE CHOKE MANIFOLD. IT MAY BE REPLACED BY A BULL PLUG FOR NORMAL DRILLING OPERATIONS, AND INSTALLED ONLY WHEN REQUIRED.
12. AN AUTOMATIC BACKPRESSURE CONTROL VALVE IS A PREFERRED ADDITION TO THE STANDARD CHOKE MANIFOLD. WHEN USED, THE BACKPRESSURE VALVE SHOULD BE INSTALLED IMMEDIATELY DOWNSTREAM FROM THE CENTER RELIEF LINE TO FLARE PIT, AND INTO MUD PIT.
13. FILL LINE TO BE LOCATED BELOW AND PREFERABLY AT 90° TO THE FLOW LINE.

AMOCO CANADA
PETROLEUM COMPANY LTD.

B.O.P. ASSEMBLY

ATTACHMENT 'B'
ARRANGEMENT 'C'

Surveyed By
Contours File
Date JULY, 1970

D. I. A. N. D. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
OIL & MINERAL DIVISION
OCT 15 1971
CALGARY 21, ALBERTA
OIL CONSERVATION ENGINEER
Northwest Territories and Yukon Territory

PROGNOSIS

AMOCO - CDR

A-1 CRANSWICK F-12

0			
50	GLACIAL DRIFT		Varies from 20' to >100';permafrost >100' to north
	CRETACEOUS		Principally shale; non-calcareous, but partly silty
300			Thin (15'-20') pebbly sand at base. Shales will probably slough
500	MISSISSIPPIAN		Shales, silts and sands
500			
1000			
1500			
2000	IMPERIAL FM.	DEVONIAN	Shales & sands; shales are fissile and will probably slough; sands are thin, tight and occur infrequently This section is probably structurally thickened and disturbed; may contain minor faults
2500			
3000			
3500			
4000			
4160	CANAL FM.		Shale, bituminous, fissile, platy.
4300			
4500	HUME FM.		Limestone, fine grained, probably dense
4600			
5000	LANDRY FM.		Limestone, fine grained probably dense.
5400			
5500			
	CRANSWICK FM.		Limestone, generally fine grained, with occasional coarser (10'-20') porous beds
6000			

10f

3500			
4000	4160		
		CANAL FM.	Shale, bituminous, fissile, platy.
	4300		
4500		HUME FM.	Limestone, fine grained, probably dense
	4600		
5000		LANDRY FM.	Limestone, fine grained probably dense.
	5400		
5500			
		CRANSWICK FM.	Limestone, generally fine grained, with occasional coarser (10'–20') porous beds
6000			
			Dolomite, fine crystalline; some poor porosity in basal part
	6430		
6500		MT. KINDLE FM.	POSSIBILITY OF FRACTURING IS INCREASED IN DOLOMITE SECTION, FROM HERE TO T.D.
			Dolomite, fine crystalline; some beds from (20'–100') of coarse porous dolomite with vugs
	6930		
7000			
		CHERTY UNIT	Dolomite, fine crystalline; beds of coarser porous dolomite up to 100' thick. Lenses and bands of solid chert in upper part and towards base. Chert may make up 40% of rock in intervals up to (30'–40') in thickness.
7500			
8000			
	8400		
8500			
		FRANKLIN MTN.	
		BASAL UNIT	Dolomite, fine crystalline; occasional porous beds up to 60' thick in upper 800'. Good intercrystalline porosity expected from 9200 – 9500'.
9000			
9500			
	9890		
10,000		MACDOUGAL	Quartzite

SILURO-ORDOVICIAN

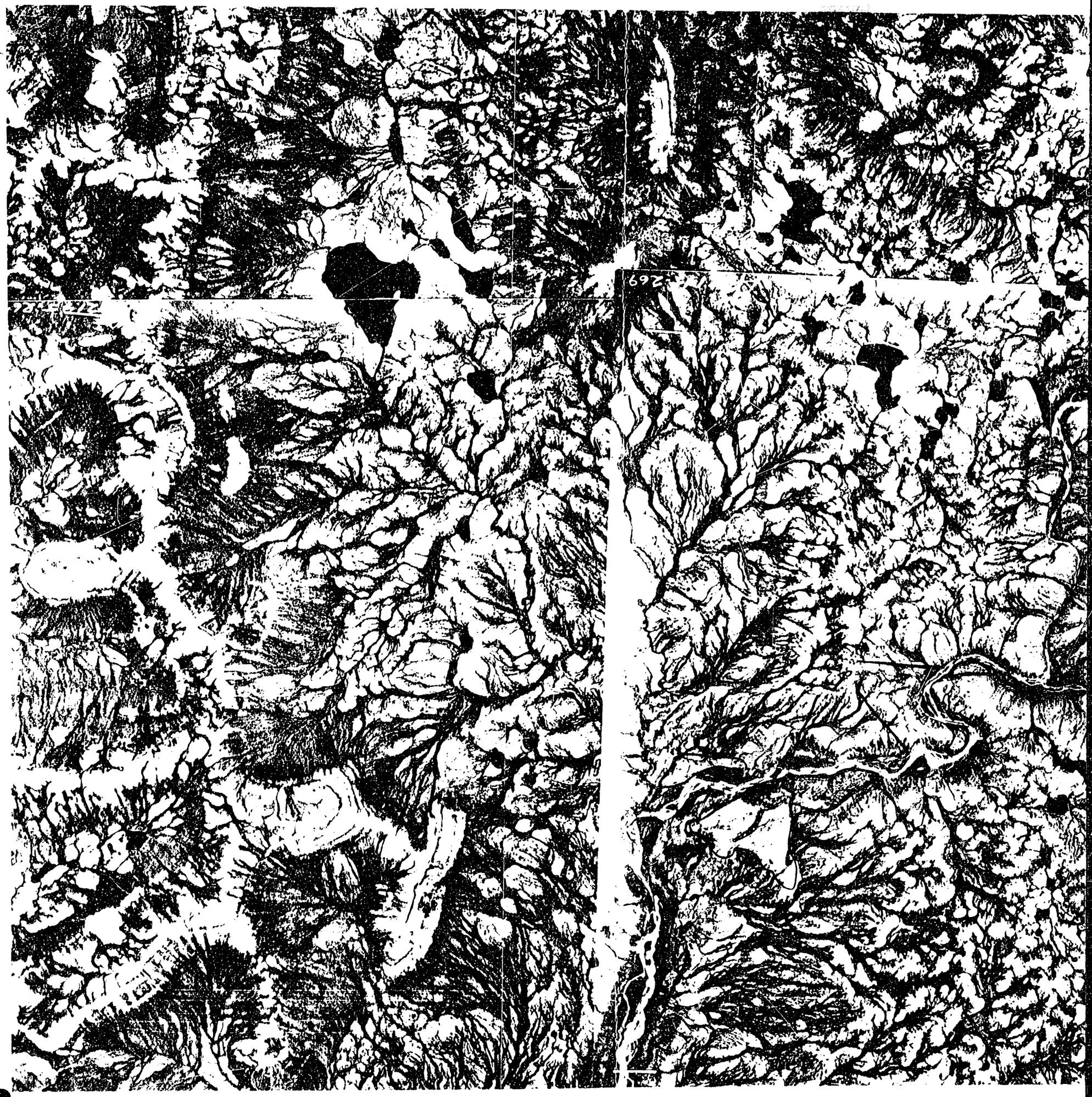
DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT OIL & MINERAL DIVISION
OCT 15 1971
CALGARY 21, ALBERTA
OIL CONSERVATION ENGINEER
Northwest Territories & Yukon Territory

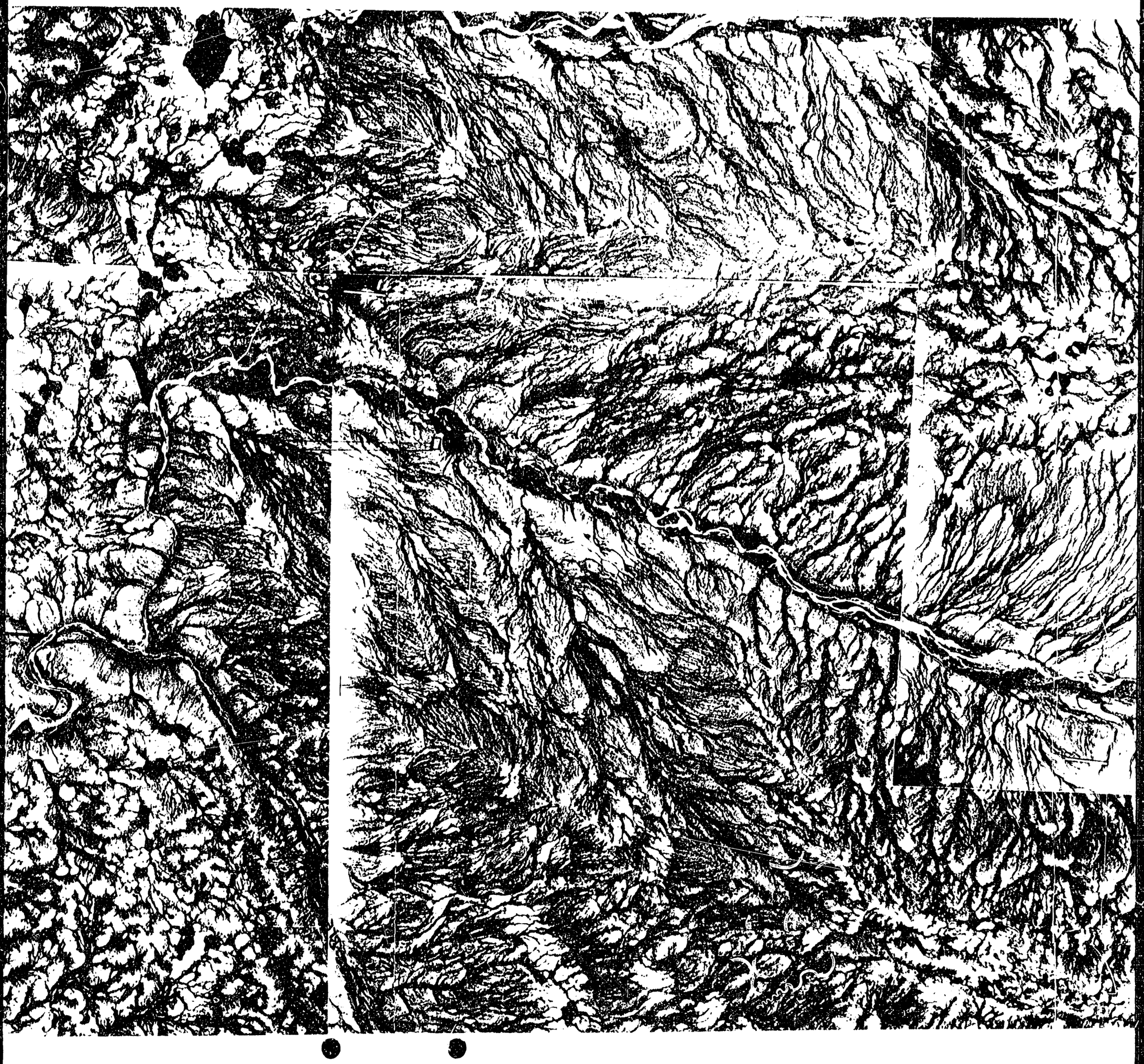
2 of 2

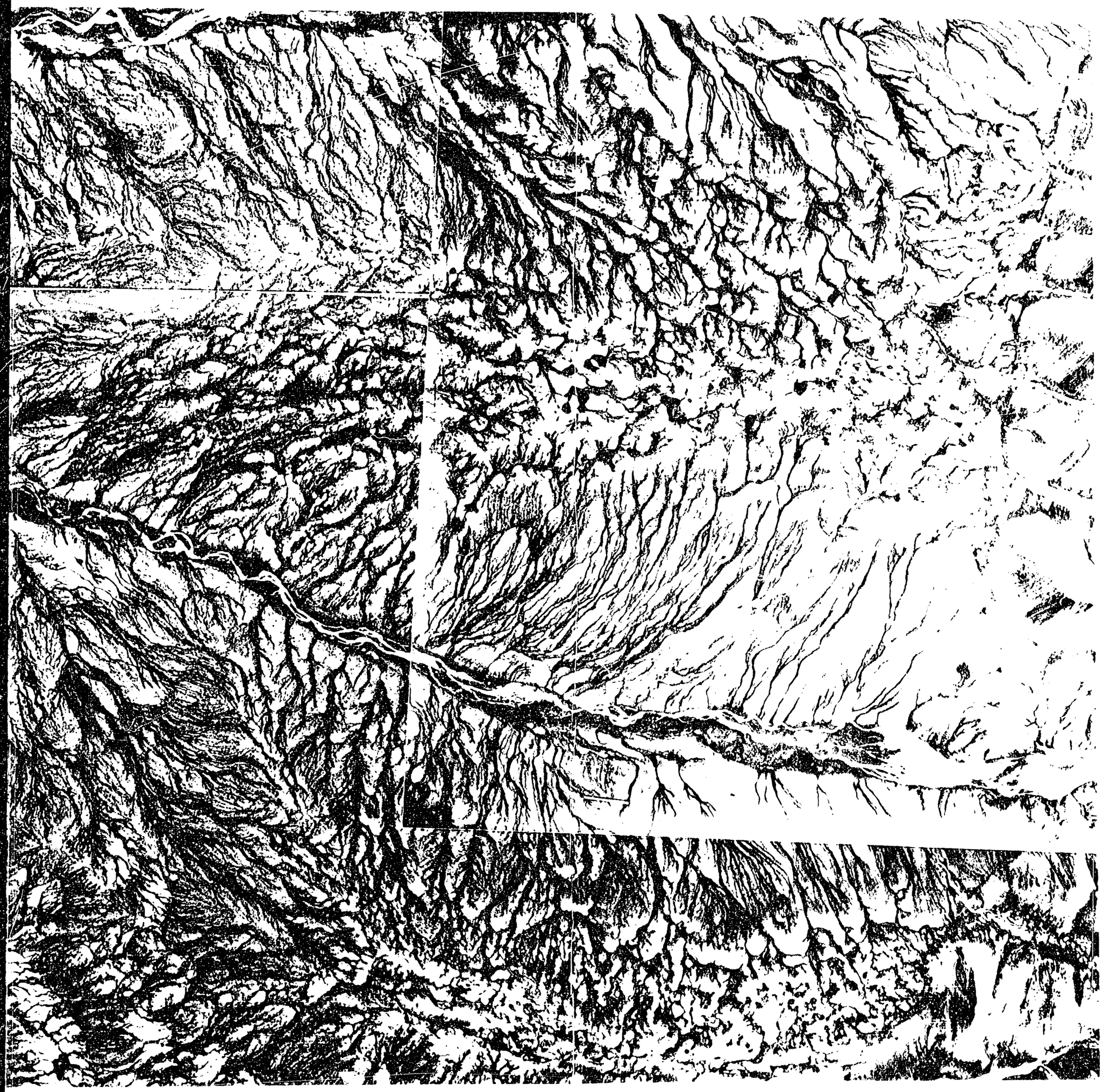
Portion of 1069 12
Scale 2" to 1 mile (approx)

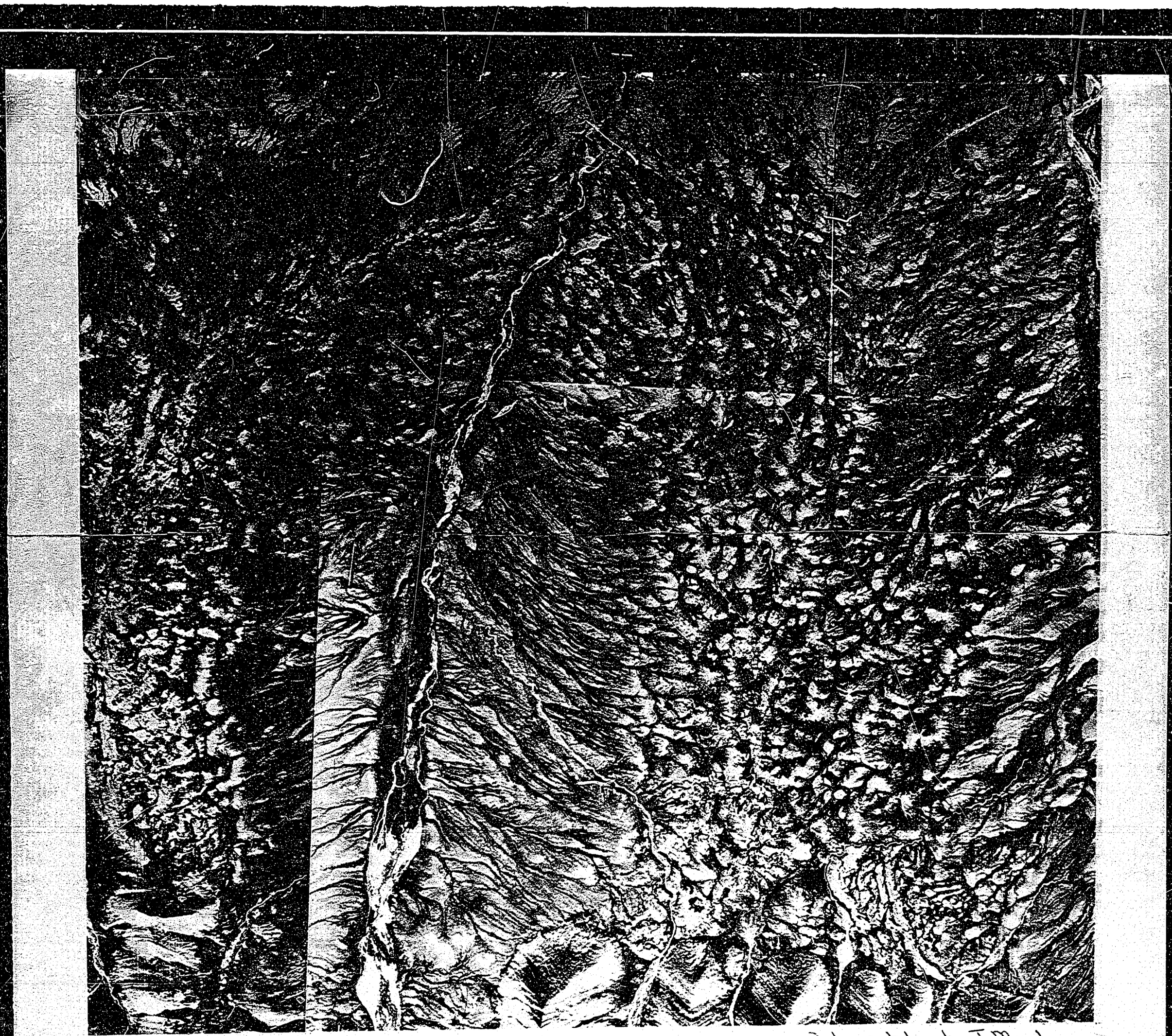
N
1

1 of









E Canaveral

EAST
LOCATION

Interpretation by J. Murphy
W. Drew June 71
C.D.R
C.W. Broughton

PROGNOSIS
AMOCO - CDR
A-1 CRANSWICK F-12

0			
50		GLACIAL DRIFT	Varies from 20' to >100';permafrost >100' to north
		CRETACEOUS	Principally shale; non-calcareous, but partly silty
300			Thin (15'-20') pebbly sand at base. Shales will probably slough
500	500	MISSISSIPPIAN	Shales, silts and sands
1000			
1500			
2000		IMPERIAL FM.	Shales & sands; shales are fissile and will probably slough; sands are thin, tight and occur infrequently This section is probably structurally thickened and disturbed; may contain minor faults
2500			
3000			
3500			
4000	4160	CANAL FM.	Shale, bituminous, fissile, platy.
	4300		
4500		HUME FM.	Limestone, fine grained, probably dense
	4600		
5000		LANDRY FM.	Limestone, fine grained probably dense.
	5400		
5503			
6000		CRANSWICK FM.	Limestone, generally fine grained, with occasional coarser (10'-20') porous beds

DEVONIAN

1 of

3500			
4000	4160	CANAL FM.	Shale, bituminous, fissile, platy.
	4300		
4500	4600	HUME FM.	Limestone, fine grained, probably dense
5000		LANDRY FM.	Limestone, fine grained probably dense.
	5400		
5500		CRANSWICK FM.	Limestone, generally fine grained, with occasional coarser (10'–20') porous beds
6000			
6500	6430	MT. KINDLE FM.	Dolomite, fine crystalline; some poor porosity in basal part POSSIBILITY OF FRACTURING IS INCREASED IN DOLOMITE SECTION, FROM HERE TO T.D. Dolomite, fine crystalline; some beds from (20'–100') of coarse porous dolomite with vugs
7000	6930	CHERTY UNIT	
7500			Dolomite, fine crystalline; beds of coarser porous dolomite up to 100' thick. Lenses and bands of solid chert in upper part and towards base. Chert may make up 40% of rock in intervals up to (30'–40') in thickness.
8000			
	8400		
8500		FRANKLIN MTN.	
9000		BASAL UNIT	Dolomite, fine crystalline; occasional porous beds up to 60' thick in upper 800'. Good intercrystalline porosity expected from 9200 – 9500'.
9500			
	9890	MACDOUGAL	Quartzite
10,000			

SILURO-ORDOVICIAN

Φ

DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
OIL & MINERAL DIVISION
OCT 15 1971
CALGARY 21, ALBERTA
OIL CONSERVATION ENGINEER
Northwest Territories & Yukon Territory

292

WELL HISTORY REPORT

AMOCO ~~GGS~~ PCP A-1 CRANSWICK ~~GGS~~ A-22

65°40'N, 131°45'W

WELL HISTORY REPORT

AMOCO FCP A-1 CRANSWICK A-22

UNIT A SECTION 22 GRID 65-40-131-45

NORTHWEST TERRITORIES

OIL & GAS OPERATIONS UNIT
Oil and Mineral Division
NOV 20 1972
OTTAWA, CANADA
Dept. of Indian Affairs & Northern Development

DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
OIL & MINERAL DIVISION
NOV 02 1972
INUVIK, N.W.T.
DISTRICT CONSERVATION ENGINEER
Northwest Territories & Yukon Territory

By:
D. Cannon
Junior Engineer

Approved by:
for A. F. Holan
Area Superintendent

AMOCO CANADA PETROLEUM COMPANY LIMITED

444 - Seventh Avenue S. W.

Calgary, Alberta

T8V 0T9

I N D E X

Section		Page
I	Summary of Well Data	1
II	Geological Summary	3
III	Engineering Summary	4
IV	Logs	7
V	Analysis	8
VI	Completion Summary	9

Attachments

Sample Descriptions

Core Descriptions

WELL HISTORY REPORT

SECTION 1 - Summary of Well Data

(a) Well Name and Number

Amoco PCP A-1 Cranswick A-22

(b) Permittee

Amoco Canada Petroleum, Canadian Pacific Oil and Gas Ltd

(c) Name of Operator

Amoco Canada Petroleum Company Limited
444 - Seventh Avenue, S. W. Calgary 2, Alberta

(d) Location

Unit A Section 22 Grid 65-40-131-45
Latitude 65° 31' 01"N, Longitude 131° 48' 55"W
Universal well location reference 65.51695°N Lat 131.81527°W Long
Unique well identifier 300A226540131450

(e) Co-ordinates

Nil

(f) Permit No

6195

(g) Drilling Contractor

Name: Peter Bawden Drilling Services Ltd
Rig: 31
Type: Rotary Unit

(h) Drilling Authority

No 540

(i) Classification

Wildcat

(j) Elevation

Ground: 2500
K.B.: 2521

(k) Spudded

January 25, 1972

(l) Completed Drilling

March 22, 1972

(m) Depths

Total depth 9413'

(n) Well Status

Abandoned ✓

(o) Rig Release

March 28, 1972 ✓

(p) Hole Size

36"	0 - 27 ✓
17"	27 - 1025 ✓
12 1/4"	1025 - 3990 ✓
8 1/2"	3990 - 9413 ✓

(q) Casing

Casing Size:	32" refrigerated conductor pipe ✓
Amount:	30' ✓
Set at:	27' ✓
Casing Size:	13 3/8" ✓
Grade:	K-55 ✓
Weight:	68# ✓
Amount:	24 joints ✓
Set at:	1025' ✓
Casing Size:	9 5/8" ✓
Grade:	N-80 LT&C ✓
Weight:	43.5# ✓
Amount:	95 joints ✓
Set at:	3990'

SECTION II - Geological Summary

(a) Formation Tops

Formation	Top (E-Log)
Glacial Drift	Spud ✓
Cretaceous	224' ✓
Mississippian	453' ✓
Devonian Imperial Fm.	730' ✓
Canol Fm.	3547' ✓
Hume Fm.	3850' ✓
Headless Fm.	4076' ✓
Landry Fm.	4317' ✓
Mt. Kindle Fm.	6767' ✓
Cherty Unit	7843' ✓
Cambrian Quartzite	9396' ✓

(b) Cored Intervals

Core #1	4000 - 4060	Cut 60' ✓	Recovered 60'	Hume Formation (not analyzed)
Core #2	4060 - 4098	Cut 38' ✓	Recovered 22'	Headless Formation (not analyzed)
Core #3	6046 - 6103	Cut 57' ✓	Recovered 47'	Landry Formation (not analyzed)
Core #4	6862 - 6882	Cut 20' ✓	Recovered 17'	Mt. Kindle Formation

(c) Core Descriptions - see attachments

(d) Sample Description - see attachments

(e) Palentological Determinations

Nil

SECTION III - Engineering Summary

(a) Drill Stem Tests

DST #1 8462' - 9415' Recovered 1300' drilling mud ✓
DST #2 7240' - 7550' Misrun ✓
DST #3 7260' - 7605' Misrun ✓

(b) Casing Record

Conductor Pipe

Hole size:	36"
Conductor size:	32" refrigerated pipe ✓
Joints run:	1 joint
KB setting depth:	27' ✓
Cement & additives:	82 sxs permafrost cement plus 2% $CaCl_2$ ✓
Date run:	January 20, 1972
Date cemented:	January 22, 1972

Surface Casing

Hole size:	17 1/2"
Casing size:	13 3/8" ✓
Weight:	68# ✓
Grade:	K-55 ST&C ✓
Joints run:	24 joints ✓
KB setting depth:	1025' ✓
Cement & additives:	670 sxs Permafrost cement and 350 sxs neat ✓
Date run:	February 5, 1972
Date cemented:	February 5, 1972

Intermediate Casing

Hole size:	12 1/4"
Casing size:	9 5/8" ✓
Weight:	43.5# ✓
Grade:	N-80 LT&C
Joints run:	95 joints ✓
KB setting depth:	3990' ✓
Cement & additives:	200 sxs neat - followed with 952 sxs neat plus 8% gel plus 0.03% HR7 tailed with 300 sxs neat ✓
Date run:	February 23, 1972
Date cemented:	February 23, 1972

Production Casing

Nil

(c) Bit Record

Bit	Size	Type	Make	In	Out	Ft.	Hrs.
1	17 1/2	YT1AJ	Reed	0	86	86	11 1/2
2	17 1/2	V2J	Smith	86	100	14	6 3/4
3	17 1/2	YT1AJ	Reed	100	100	0	0
4	12 1/4	SS1GJ	Reed	100	196	96	2 3/4
5	12 1/4	YMGJ	Reed	196	292	96	5 1/2
3 RR	17 1/2	YT1AJ	Reed	292	301	9	R 7 3/4 D 1/2
6	17 1/2	YS1GJ	Reed	301	587	286	15 1/4

Bit	Size	Type	Make	In	Out	Ft.	Hrs.
7	12 1/4	XDV	Hughes	587	1025	438	22
8	17 1/2	Reamer	Reed	587	1025	438	25 1/2
9	12 1/4	X1G	Hughes	1025	1745	720	15 1/4
10	12 1/4	X1G	Hughes	1745	2145	400	15
11	12 1/4	M4LG	Sec	2145	2638	493	17
12	12 1/4	XDV	Hughes	2638	3283	645	22 1/2
13	12 1/4	M44N	Sec	3283	3506	223	15 1/2
14	12 1/4	YMG	Reed	3506	3778	272	17
15	12 1/4	H77S	Sec	3778	3890	112	6 1/2
16	12 1/4	M44	Sec	3890	3990	100	7 1/4
17	8 1/2	X1G	Hughes	3990	4000	10	3/4
18	8 15/32	Diamond	Chris	4000	4060	60	5 1/4
18 RR	8 15/32	Diamond	Chris	4060	6098	38	7
19	8 1/2	M44	Sec	4098	4542	444	22 1/4
20	8 1/2	XDV	Hughes	4542	5016	474	26 3/4
21	8 1/2	M44N	Sec	5016	5442	426	22 3/4
22	8 1/2	SHG	Reed	5442	6001	559	25 1/4
23	8 1/2	SHG	Reed	6001	6046	45	2 1/2
24	8 15/32	Diamond	Chris	6046	6103	57	13
25	8 1/2	SHG	Reed	6103	6405	302	19 1/4
26	8 1/2	SHG	Reed	6405	6728	323	19 1/4
27	8 1/2	SCM	Reed	6728	6862	134	6 1/2
28	8 15/32	Diamond	Chris	6862	6882	20	3 3/4
29	8 1/2	M88	Sec	6882	7163	281	12 1/2
30	8 1/2	SS7	Smith	7163	7465	302	14 1/4
31	8 1/2	H88	Sec	7465	7902	437	23 1/4
32	8 1/2	H88	Sec	7902	8370	468	23 3/4
33	8 1/2	SS7	Smith	8370	8750	380	14 3/4
34	8 1/2	SC4G	Reed	8750	8879	129	5
35	8 1/2	5JS	Smith	Ream	127		16 1/2
23 RR	8 1/2	SHG	Reed	8879	8879	0	0
35 RR	8 1/2	5JS	Smith	8879	9323	444	25 1/4
36	8 1/2	5JS	Smith	9323	9413	90	10 3/4

(d) Mud Report

Type - water base-gel-polyer
Quantity - 192,000# bentonite
1,000# polymer
2,000# barite
250# caustic
5,600# soda ash
3,300# bicarbonate
350# Xpel-G

(e) Deviation Record

Depth	Deviation (Degrees)	Depth	Deviation (Degrees)
55	5/8	360	1
86	1/2	390	1
90	5/8	420	1
150	1/2	480	1
220	1/4	543	1 1/2
285	5/8	573	2

Depth	Deviation (Degrees)	Depth	Deviation (Degrees)
615	2	2990	6
650	1 1/2	3120	5 7/8
715	1 3/4	3275	6 1/2
746	1 1/2	3383	6
847	1 1/2	3500	7 3/8
910	1 1/8	3698	7 1/4
970	3/4	3890	7
1025	3/4	3990	7
1050	1 3/4	4150	7 1/2
1115	1	4200	7 1/8
1175	3/4	4330	6 3/4
1390	1	4495	6 1/4
1490	1 1/2	4635	6 1/8
1700	2	4800	6 1/8
1730	2	4910	6 1/8
1800	2 1/4	5010	5 3/4
1835	//8	5070	5 3/4
1900	1 1/2	5200	5 3/4
1960	2 1/4	5320	6
1990	2 1/8	5430	6
2050	3	5664	5 3/4
2120	3 1/4	6010	6
2190	2 1/8	6510	5 7/8
2250	3 1/2	6697	5 1/2
2310	3 3/4	6860	5 1/2
2370	4 1/8	7125	6
2430	5	7900	7 5/8
2500	4 7/8	8100	6 3/4
2560	4 7/8	8348	7 3/4
2620	4 7/8	8730	6
2630	4 1/2	9051	5 7/8
2680	5	9146	5 1/4
2810	5 3/4	9320	6
2867	5 7/8	9410	5 1/2

(f) Abandonment Plugs

Plug #1 9413 - 8800 350 sxs neat - no feel ✓
Plug #2 7800 - 7550 118 sxs neat - felt ✓
Plug #3 4040 - 3940 92 sxs neat - felt ✓
Surface plug 5 sxs

(g) Lost Circulation Zones

Nil

(h) Report of Blowouts

Nil

SECTION IV - Logs

Date	Type	Interval
February 3, 1972	BHC Sonic - Caliper	1024' to surface
February 3, 1972	D.I.L.	1020' - 50'
February 21, 1972	BHC Sonic	3887' - 1025'
February 21, 1972	D.I.L.	3882' - 1025'
February 21, 1972	SNP	3888' - 1025'
February 21, 1972	HDT	3884' - 1027'
February 21, 1972	FDC	3888' - 1025'
March 19, 1972	BHC Sonic - Caliper	8876' - 3986'
March 19, 1972	Formation Density	8875' - 3986'
March 19, 1972	SNP	8875' - 3986'
March 19, 1972	D.I.L.	8867' - 3986'
March 19, 1972	Dipmeter	N/A
March 23, 1972	D.I.L.	9402' - 3986'
March 23, 1972	BHC Sonic - Caliper	9406' - 7000'

These logs have been transmitted previously as per the letter of April 17, 1972 from Mr. J. D. Burns to Mr. M. Thomas, District Conservation Engineer, Department of Indian Affairs and Northern Development.

SECTION V - Analysis

(a) Core Analysis - see attachments

(b) Water Analysis - see attachments

(c) Gas Analysis

Nil

(d) Oil Analysis

Nil

SECTION VI - Completion Summary

(a) Tubing Record

Nil

(b) Perforation Record

Nil

(c) Cementation Record

Nil

(d) Acidization and Fracturing Record

Nil

(e) Back Pressure and Production Tests

Nil

FILE

CORE LABORATORIES – CANADA, LTD.
CALGARY, ALBERTA

COMPANY AMOCO CANADA PETROLEUM COMPANY LTD.
WELL AMOCO PCP A-1 CRANSWICK A-22
FIELD WILDCAT
LOCATION 65 31' 01.00 N. LAT.
131 48' 55.00 W. LONG.

FORMATION
DRILLING FLUID WATER BASE MUD
ELEVATION
ANALYSIS FULL DIAMETER
REMARKS ALL SAMPLES SANDBLASTED PRIOR TO KH ANALYSIS

PAGE 1 OF
FILE 913-272
DATE REPORT MAR. 15/72
ANALYSTS BK

ASP - APPEARS SIMILAR TO
* - BROKEN CORE
(PC - USED FOR SUMMARY PURPOSES)
** - PERMEABILITY > 10000 MD
FS - FINE SAND
MS - MEDIUM SAND
CS - COURSE SAND
CONG - CONGLOMERATE
DOL - DOLOMITE
SH - SHALE
LMY - LIMY
SHY - SHALY
BK - BREAK
BIT - BITUMEN
CARB - CARBONACEOUS
A - ANHYDRITE
FOSS - FOSSILIFEROUS
XLN - CRYSTALLINE
LAM - LAMINATIONS
V - VUGULAR
LV - LARGE VUGS
SV - SMALL VUGS
PPV - PIN POINT VUGS
I - INTERGRANULAR
STY - STYOLITIC
HF - HORIZONTAL FRACTURE
VF - VERTICAL FRACTURE
SS - SMALL SAMPLE
SL - SLIGHTLY
V - VERY
W - WITH

SAMPLE NUMBER	INTERVAL REPRESENTED FEET DEPTH	THICK	PERMEABILITY TO AIR MILLIDARCYS KMAX	K90°	KV	PERMEABILITY FEET	POROSITY %	POROSITY FEET	DENSITY BULK	GRAIN	VISUAL EXAMINATION
	CORE NO. 4		MEAS. 14.5'	5 BOXES							
1	.0- 1.3	1.3	-0.1	-0.1	-0.1	-	1.0	1.30	2.74	2.77	I
2	1.3- 2.6	1.3	-0.1	-0.1	-0.1	-	.8	1.04	2.76	2.78	DENSE
3	2.6- 4.0	1.4	-0.1	-0.1	-0.1	-	.8	1.12	2.78	2.81	DENSE
	4.0- 4.8	.8	-	-	-	-	-	-	-	-	RUBBLE
4	4.8- 5.9	1.1	-0.1	-0.1	-0.1	-	.7	.77	2.78	2.80	FEW PPV
5	5.9- 6.8	.9	-0.1	-0.1	-0.1	-	.7	.63	2.80	2.82	FEW PPV
	6.8-10.8	4.0	-	-	-	-	-	-	-	-	DENSE
6SS	10.8-11.8	1.0	-0.1	-	-	-	4.3	4.30	-	-	I FEW SV
	11.8-14.5	2.7	-	-	-	-	-	-	-	-	DENSE

Form 51

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
P.O. BOX 5670, POSTAL STATION "A"
CALGARY 9, ALBERTA
TELEPHONE: 253-3391

COMPANY	Amoco Canada Petroleum Corporation	PAGE	1 of 1
WELL	Amoco PCP A-1 Cranswick A-22	FILE	933-2438
FIELD	Wildcat, Northwest Territories	GRD. ELEVATION	2500'
LOCATION	65 31' 01.00 N.L. 131 48' 55.00 W.L.		

Mud Filtrate Analysis

Sampled From	Resistivity (Ohm-meters)	Chloride (mg/liter)
Sample #1 (Flow Line Pump-Collected Prior to DST) March 20, 1972	5.79	29
Sample #2 (Flow Line Pump-Collected Prior to DST) March 20, 1972	5.90	29
Mud in hole - Prior to test at T.D. March 23, 1972	4.79	15
DST #1 (Drill Stem Bottom) Ronning Formation March 24, 1972	5.08	15

Amoco - PanCanadian
A-1 Cranswick
Wellsite Sample Description

	Sample study begins at 50' in glacial drift.
50-60	ss, wh-brn, coarse qtz, some grn? igneous material.
60-70	ss, a.a., coarse, some rounded pebbles, glacial drift, loose.
70-80	abwt pebbles, volcanic? and coarse qtz. ss, loose, iron stn.
80-90	boulders, no sample.
90-100	large pebbles, ang-sub rounded, qtzitic ss and basic igneous rocks, grn.
100-110	ss, wh, bf, grn, qtz, tr grn ign rock pebbles.
110-120	ss, wh, bf, iron stn, clr qtz, med-coarse grn, and pebbles, volcanic.
120-130	no sample.
130-140	ss, a.a., iron stn, volc pebbles.
140-150	ss, with grn ign rock, a.a. - pyroxene and plag felspar.
150-160	ss and ign rock a.a.
160-170	ss, pebbly, wh-bf, iron stn, med-coarse grn, sub rounded, and rounded pebbles.
170-180	pebbly ss, a.a., indurated, abwt grn, ign, sub rounded pebbles, pyrite.
180-190	ss, a.a., abwt assorted pebbles, sub ang - sub rounded, iron stn.
190-200	ss, bf, ferraginous, med gr a.a., dense, assorted pebbles.
200-210	ss, yellow, a.a. and tr dk grn ign rock and brown lithe ls, pebbles.
210-220	ss, variecolored and assorted pebbles a.a.
220-230	sh, dk gy, micro micaceous, diss pyrite and ss, a.a.
230-240	sh, dk gy and ss, a.a., cavings.
240-250	sh, a.a., minor ss, yellow f-m grn, qtz.
250-260	sh, dk gy, micro micaceous, pyrite.

260-270	sh, a.a., occ floating qtz grn and silt st, gy, glauconite fleks, pyr spicules
270-280	sh, dk gy, micromic, silty, glauc fleks.
280-290	sh, sl silty, a.a., pyr, tr ss, brn, f-m gr qtz? caving
290-300	sh, gy, micromic, sl silty, and v siltst, gy, glauconitic.
300-310	sh, a.a., pyrite.
310-320	a.a.
320-330	sh, dir gy, micromic, pyrite.
330-340	sh, a.a., sl silty.
340-350	sh, a.a., floating qtz grains, rounded and siltst, gy, glauc.
350-360	sh, dk gy, micromic, sl silty, 10% ls stringers, dk brn, f-mx tight.
360-370	sh, a.a., tr siltst and ls, a.a.
370-380	sh, dk gy, silty, pyrite.
380-390	a.a.
390-400	ss, 80%, med gy, qtz, tr glauc, part dirty, f-mgr, sub rounded med (part poor) ig ϕ 5% tr sh, sorted, sil cmt
400-410	ss, lt gy, qtz, sub rounded, tr ig ϕ and ss, dirty, a.a., minor siltst, gy.
420-430	ss, a.a., 5% ig, ϕ, tr sh, gy and siltst, gy.
430-440	siltst, gy, glauc, noncalc, minor vfgr ss, lt gy, qtz, sub ang, poor ϕ, pyrite.
440-450	sh, gy, minor ss, siltst, a.a., some lt brn siltst, floating qtz grains.
450-460	ss, lt gy, qtz, glauc, vfgr, poorly sorted, sub ang, shaly streaks sil cmt.
460-470	sh, gy,minor ss, a.a., carbonaceous streaks.
470-480	sh, 80% and ss, a.a., pyrite.
480-490	sh, gy, micromic, sl silty, 20% ss, gy, vfgr, qtz poor ϕ.
490-500	sh, gy and siltst - vfgr ss stringers.

500-510	sh, a.a., tr siltst, gy.
510-520	sh, a.a., minor siltst gy to vfgr dirty ss.
520-530	sh and minor ss, a.a., pyrite.
530-540	sh, dk gy, micromic, pyrite.
540-550	sh, gy, non calc, tr siltst, gy.
550-560	sh and minor siltst a.a.
560-570	sh, a.a.
570-580	sh, dk gy, micromic, minor siltst, anhyd stringgs.
580-590	sh, a.a., tr vfgr ss to siltst tr anhyd.
590-600	sh, dk gy, tr ss, vfgr, qtz, sub any, sil.
600-610	sh, a.a., minor gy-brn siltst, and anhydrite stringers.
610-620	sh, dk gy, pyrite, tr siltst, shell impression.
620-630	sh, dk gy, micromic, pyrite, <5% vfgr ss, qtz, tr anhyd.
630-640	sh, a.a., sl silty, pyrite.
640-650	sh, v dk gy, and siltst, a.a.
650-660	sh, dk gy, sl silty, and 30% dol, med-dk gy, fx, silty and highly arg, dense bituminous.
660-670	sh, dk gy, silty and siltstone, dol - arg dol a.a.
670-680	sh. a.a. pyrite and minor siltst, dol.
680-690	sh, a.a., pyrite tr. dol, gy-brn, vfx, v. arg.
690-700	sh, dk gy, silty, micromic, and siltst gy, tr dol, a.a.
700-710	sh, a.a., 20% siltst, rare dol, anhyd, bituminous patched
710-720	siltstone, v dk gy-bl, bituminous, 20% sh, gy, micromic, anhyd partings.
720-730	siltstone, gy and 20% sh, a.a.
730-740	siltstone to vfgr ss, a.a. sl dol, lt gy, and 20% sh, a.a.
740-750	sh, lt-med gy, soft, micromic, pyrite, tr siltstone, a.a.

750-760	sh, a.a., tr siltst, dk gy.
760-770	sh, lt-med gy, micromicaccous.
770-780	sh, a.a., anhyd partings.
780-790	sh, a.a., non calc, soft, tr brn siltst.
790-800	a.a.
800-810	sh, med gy, soft, micromic, rare (2-3%) gy-brn siltst.
810-820	a.a.
820-830	sh, lt-med gy.
830-840	sh, soft, gy, tr sh gy-brn, sl silty.
840-850	a.a. tr gy siltst, s.l.
850-860	sh, med gy, tr brn, micromic, soft.
860-870	sh, a.a., anhydrite partings.
870-880	a.a. sl silty, pyrite.
880-890	sh, soft, gy, minor siltst, s.l.
890-900	a.a.
900-910	sh, gy, tr silty.
910-920	a.a.
920-930	a.a.
930-940	sh, gy, micromiccaceous, sl silty, non calc.
940-950	sh, gy, mic, siltst strngrs, s.l.
950-960	a.a.
960-970	a.a.
970-980	sh, gy, and minor sh, brn, s.l.
980-990	sh, gy, tr brn a.a.
990-1000	sh, med gy, soft, non calc and gy brn sh, hard sil, sl silty.
1000-1010	a.a.
1010-1020	sh, gy, micromicaceous.

1020-1030	very poor sample - cmt and ss from above.
1030-1040	v.p.s., cmt, a.a.
1040-1050	sh, gy, soft, non calc.
1050-1060	sh, medium gy, v-soft, micromic, slsilty.
1060-1070	sh, gy, micromic.
1070-1080	a.a.
1080-1090	a.a.
1090-1100	sh, a.a.
1100-1110	sh, gy, soft, non calc, mic, pyrite.
1110-1120	sh, a.a.
1120-1130	sh, a.a., minor siltst lenses.
1130-1140	sh, gy, mic, silty in part.
1140-1150	sh, a.a., tr. siltst.
1150-1160	sh, gy, sl.silty.
1160-1170	a.a.
1170-1180	sh, gy, micromic.
1180-1190	a.a., sl. silty.
1190-1200	a.a.
1200-1210	sh, gy, mic, tr siltst, gy.
1210-1220	sh, gy, sl. silty, and tr. siltst, a.a.
1220-1230	sh, gy, mic, sl. silty.
1230-1240	a.a.
1240-1250	sh, gy, siltst, lenses, anhyd streaks.
1250-1260	sh, med. gy, sl mic.
1260-1270	a.a.
1270-1280	sh, a.a., minor gy siltst.

1280-1290	sh, med gy.
1290-1300	sh, a.a., part silty.
1300-1310	a.a.
1310-1320	a.a.
1320-1330	sh, med gy, micromicaceous, non calc, pyrite, tr. siltst., gy.
1330-1340	sh, a.a.
1340-1350	a.a.
1350-1360	a.a.
1360-1370	sh, gy, micromic, sl. silty.
1370-1380	a.a.
1380-1390	sh, med gy, non calc.
1390-1400	a.a.
1400-1410	sh, gy, silty.
1410-1420	sh, med gy.
1420-1430	a.a.
1430-1440	a.a.
1440-1450	sh, gy, non calc, sl micromicaceous.
1450-1460	sh, a.a.
1460-1470	a.a.
1470-1480	a.a.
1480-1490	sh, med gy, sl. micromic, soft, non calc.
1490-1500	sh, a.a.
1500-1510	a.a.
1510-1520	sh, med gy, non calc, micromicaceous
1520-1530	sh, a.a.

1530-1540	a.a.
1540-1550	sh, a.a., anhyd. parting.
1550-1560	sh, tr anhyd.
1560-1570	sh, med gy, sl. silty, anhyd stringers.
1570-1580	sh, gy, non calc, micromicaceous, tr anhyd.
1580-1590	sh, a.a., anhydrite, fractured.
1590-1600	sh, and anhydrite partings.
1600-1610	sh, med gy, v. sl. silty.
1610-1620	sh, a.a., sl. silty.
1620-1630	a.a.
1630-1640	sh, a.a., tr. pyrite, qtz xals.
1640-1650	sh, gy, non calc., micaceous, tr. siltst, gy.
1650-1660	sh, gy, sl. silty.
1660-1670	sh, med/dk gy.
1670-1680	a.a.
1680-1690	a.a.
1690-1700	sh, med/dk gy, in part silty, micromicaceous.
1700-1710	sh, silty, a.a.
1710-1720	sh, med gy, micaceous.
1720-1730	sh, a.a., in part silty.
1730-1740	no sample.
1740-1750	no sample.
1750-1760	sh, dk gy, micromicaceous, non calc, minor siltst, gy, tr anhydrite streaks.
1760-1770	sh, a.a.

1770-1780	sh, a.a., sl. silty, tr anhydrite.
1780-1790	sh, gy, non calc.
1790-1800	sh, med/dk gy, sl. micromic, non calc.
1800-1810	a.a.
1810-1820	sh, a.a.
1820-1830	a.a.
1830-1840	sh, dk gy, sl. silty.
1840-1850	sh, a.a.
1850-1860	sh, dk gy, in part silty.
1860-1870	a.a.
1870-1880	sh, a.a. silty stringers, anhydrite in fractures.
1880-1890	sh, tr siltst, a.a., silt.
1890-1900	siltst, med/dk gy, micaceous, non calc, and silty sh.
1900-1910	sh, dk gy, silty, tr siltst, a.a.
1910-1920	sh, a.a., and interbed siltst, med gy, sl. silt, tr bitumen, land.
1920-1930	sh, dk gy, mica, sl. silty, tr siltst, a.a.
1930-1940	sh, and tr. sil siltst, a.a.
1940-1950	siltst, med gy, sil and interbed sh, dk gy, micromic, tr anhydrite, fracture.
1950-1960	siltst, gy, sil, hard, and sh, dk gy.
1960-1970	siltst and shale, a.a.
1970-1980	siltst, med gy, sl. dol, minor ss, lt-med gy, v.fgr, qtz, dirty, tight.
1980-1990	siltst, soft, gy, anhydrite in fracture, tr sh, gy, non calc.
1990-2000	siltst, a.a., 10% gy sh, v. soft.

2000-2010	siltst, sl. dolomite and 10% sh.
2010-2020	sh and siltst, a.a. 50:50
2020-2030	siltst, a.a. 25% sh, gy, micaceous, sl. silty, minor dk gy sil siltst.
2030-2040	siltst, dk and lt banded, sil, hard, mica, minor sh, dk gy.
2040-2050	siltst, banded a.a., tr sh.
2050-2060	sh, gy, silty, interbed siltst, a.a.
2060-2070	siltst, med gy, in part sil, 10% gy sh, silty.
2070-2080	a.a. 50:50, tr anhydrite 2
2080-2090	siltst, a.a., minor sh, gy, anhydrite fractures.
2090-2100	siltst, gy, mica, sandy lenses, and tr sh, gy, mica.
2100-2110	sh, dk gy, micaceous, 50% banded siltst, a.a.
2110-2120	siltst, med gy, banded, sl dol, minor v.f.gr. ss, lt gy, lenses, dirty, tight, tr gy sh.
2120-2130	interbed sh, siltst, and ss, lt gy, v.f.gr., dirty, bituminous str, otz, banded.
2130-2140	siltst, gy, in part sil, sl dol, and silty sh, and ss lenses, a.a.
2140-2150	sh, gy, silty and siltst, sil, sl dol, a.a.
2150-2160	siltst, med gy, in part sil, v. sl dol, banded, minor silty, micaceous sh.
2160-2170	siltst, lt-med gy, sil, and sh, silty, mic, a.a.
2170-2180	banded sh, and siltst a.a., tr anhydrite.
2180-2190	a.a. tr ss, v.f.gr., qtz, loose qtz xals, fracture.
2190-2200	interbed sh, siltst and ss, a.a. part sil.
2200-2210	siltst, gy sil, and v.f.gr. ss lenses, minor dk gy sh, mic, silty.
2210-2220	dark and lt banded siltst, sil. sl dol, tr ss, a.a., dirty.
2220-2230	siltst, a.a., minor sh, dk gy silty.

2230-2240	sh and siltst, a.a. 50:50.
2240-2250	banded siltst, ss lenses, vfgr, med gy, qtz, sli dol, tr sh, a.a., pyrite.
2250-2260	sh, dk gy, silty, 20% siltst, a.a.
2260-2270	banded siltst and sh, a.a., dol in part.
2270-2280	siltst, banded, a.a., in part sil, dol and minor sh, a.a. qtz xals.
2280-2290	silty sh, and siltst, a.a. anhydrite fracture.
2290-2300	siltst, a.a. to v.f.gr. ss, qtz, dirty, minor sh, banded, qtz xals.
2300-2310	siltst, med gy, micaceous, non calc.
2310-2320	sh, dk gy, silty, minor siltst, a.a.
2320-2330	a.a., tr anhydrite.
2330-2340	sh, dk gy, silty, micromic, minor siltst, v. sli dolomite
2340-2350	sh and minor banded siltst, a.a.
2350-2360	sh, dk gy, silty, micromic, minor banded siltst.
2360-2370	gy to drk gy sh, silty, minor banded siltstone.
2370-2380	drk gy, silty, sh, w/thin bands of siltstone.
2380-2390	gy sh, sl silty and tr sand.
2390-2400	gy sh, sl silty.
2400-2410	gy sh, a.a., v. sl silty w/sl tr anhydrite.
2410-2420	gy sh, a.a. v. sl silty, w/sl tr anhydrite in fracture.
2420-2430	gy sh, sl silty.
2430-2440	a.a.
2440-2450	a.a.
2450-2460	a.a.
2460-2470	a.a.
2470-2480	a.a.

2480-2490	a.a.
2490-2500	gy sh, sl silty, w/tr anhydrite.
2500-2510	gy, silty sh, tr pyrite, tr silt banding.
2510-2520	gy, silty sh, w/silt banding.
2520-2530	a.a.
2530-2540	a.a.
2540-2550	a.a.
2550-2560	a.a., tr pyrite.
2560-2570	gy, silty, sh, sl mic, minor anhydrite in fractures.
2570-2580	gy, silty sh.
2580-2590	gy, sl silty, sh w/tr pyrite and anhydrite in fractures.
2590-2600	dk gy and gy sh, sl mic, tr anhydrite in fractures, sl silty.
2600-2610	dk gy, sl mic sh, sl silty, tr pyrite and tr anhydrite.
2610-2620	sh, a.a., w/tr pyrite.
2620-2630	dk gy, sl mic sh, v.sl. tr pyrite, v.sl. silty.
2630-2640	dk gy, sl mic sh, tr pyrite and anhydrite in fractures.
2640-2650	dk gy, sh and 10% gy sh, tr silty sh.
2650-2660	dk gy sh, silty, tr pyrite and anhydrite.
2660-2670	dk gy sh, silty, tr pyrite and anhydrite.
2670-2680	dk gy sh, silty, tr pyrite.
2680-2690	dk gy, micro-mic, sh.
2690-2700	dk gy, micro-mic, sh v.sl. silty.
2700-2710	dk gy to blk, micro-mic sh (hard), tr pyrite.
2710-2720	dk gy, micro-mic sh, tr pyrite.
2720-2730	a.a., w/tr anhydrite and tr sil sd.

2730-2740	dk gy, mic mic sh, tr anhydrite and tr dolomitic silt.
2740-2750	a.a.
2750-2760	a.a.
2760-2770	gy sh, micro-mic sh.
2770-2780	a.a.
2780-2790	a.a.
2790-2800	gy to dk gy sh, tr brn, dolomitic siltst.
2800-2810	gy sh, tr dk gy sh w/tr silty sh.
2810-2820	gy to dk gy sh, silty.
2820-2830	gy, micro-mic sh w/tr brn, micro-xln, dol, sl silty.
2830-2840	gy, micro-mic sh w/tr brn siltst.
2840-2850	gy, sh, tr blk sh and sl tr brn dol, sl silty
2850-2860	gy sh, tr dol.
2860-2870	gy sh.
2870-2880	gy sh, sl silty.
2880-2890	a.a.
2890-2900	gy sh.
2900-2910	a.a.
2910-2920	a.a.
2920-2930	a.a. w/tr anhydrite.
2930-2940	gy sh.
2940-2950	a.a.
2950-2960	a.a., v. silty.
2960-2970	a.a., v. silty.
2970-2980	a.a.
2980-2990	a.a.
2990-3000	gy sh w/tr pyrite.

3000-3010	gy sh, sl micro-mic, tr pyrite.
3010-3020	gy sh, sl silty and tr pyrite.
3020-3030	gy sh.
3030-3040	gy sh.
3040-3050	gy sh w/tr pyrite.
3050-3060	gy sh.
3060-3070	gy, micro-mic sh, v. sl. silty.
3070-3080	gy sh.
3080-3090	gy sh, tr pyrite, tr anhydrite, sl silty.
3090-3100	gy sh, micro-mic w/finelydisseminated pyrite.
3100-3110	gy sh, v. sl. silty.
3110-3120	a.a.
3120-3130	a.a.
3130-3140	a.a.
3140-3150	gy, micro-mic sh, sl.silty.
3150-3160	gy micro-mic sh, tr anhy, tr silt.
3160-3170	gy micro-mic sh, w/siltstone.
3170-3180	gy micro-mic sh, sl silty.
3180-3190	gy mic sh, w/dolomitic siltstone.
3190-3200	gy mic-mic sh, a.a., tr siltstone.
3200-3210	gy mic sh w/dol siltst. (one qtz xl)
3210-3220	dirty, dolomitic siltst w/gy mic sh, tr silt. (lqtz xl)
3220-3230	gy mic sh, tr silt.
3230-3240	dk gy to tr blk mic sh, tr pyrite.
3240-3250	dk gy to blk pyritic sh.
3250-3260	dk gy to blk pyritic sh, v. sl. tr sh.

3260-3270	dk gy to blk mic sh.
3270-3280	dk gy mic sh, tr pyrite.
3280-3290	dk gy and gy sh, tr siltst.
3290-3300	dk gy sh mic-mic, tr anhy and pyrite and silt.
3300-3310	dk gy sh micro-mic, tr dol and anhydrite.
3310-3320	dk gy micro-mic sh w/dolomitic siltst.
3320-3330	dirty, brn dolomitic siltst w/some blk sh.
3330-3340	dk gy to blk sh w/dirty dol siltst. 50-50
3340-3350	70 to 80% dirty brn siltst, dolomitic w/blk sh 30%.
3350-3360	80 to 90% dirty brn dol siltst w/10 to 20% blk sh.
3360-3370	gy mic sh 50% w/50% dol siltst.
3370-3380	gy sh and blk sh 60% w/40% dol silt, a.a.
3380-3390	gy and blk mic sh w/20% dirty brn silt, aa, tr anhy.
3390-3400	gy and blk mic sh w/20% brn dol siltst.
3400-3410	dk gy and gy mic sh, finely disseminated pyrite w/tr dol silt and anhydrite.
3410-3420	dk gy and blk mic-mic sh, tr pyrite, tr siltst. a.a.
3420-3430	dk gy to gy sh w/15 to 20% brn and gy, dirty siltst, tr pyrite.
3430-3440	blk and gy mic sh, tr pyrite and siltst. a.a.
3440-3450	a.a.
3450-3460	a.a.
3460-3470	gy and dk gy mic sh, tr pyrite and anhydrite w/brn siltst a.a. 40%.
3470-3480	dk gy and gy sh w/brn sil, siltst, sl dolomitic.
3480-3490	a.a.
3490-3500	brn siltst w/tr sh, anhydrite in frac, qtz xl.

3500-3510	gy sh, tr pyrite w/some sil siltst.
3510-3520	gy sh, tr blk sh w/brn sil siltst.
3520-3530	lt brn sil siltst w/tr gy sh.
3530-3540	a.a.
3540-3550	a.a.
3550-3560	dk gy and blk sh (tr bituminous) pyrite w/brn sil, siltst, a.a.
3560-3570	dk gy mic sh w/some blk sh, tr pyrite w/brn sil siltst.
3570-3580	a.a.
3580-3590	a.a.
3590-3600	blk sil sh, pyrite w/tr brn siltst, a.a.
3600-3610	blk sil, pyritic sh w/sl tr brn, siltst, v. sl. tr blk chert.
3610-3620	blk sil and pyritic sh, micaceous, v. sl. tr blk chert and lt blue crin frag.
3620-3630	a.a. w/blue cherty crin frag, tr blk ch.
3630-3640	a.a. w/blk cht band.
3640-3650	blk sil and pyritic sh.
3650-3660	a.a.
3660-3670	a.a. w/tr calcite in thin frac.
3670-3680	a.a.
3680-3690	a.a.
3690-3700	a.a.
3700-3710	blk silicaceous shale.
3710-3720	a.a.
3720-3730	a.a.
3730-3740	a.a.
3740-3750	a.a.

3750-3760	blk sil sh w/tr pyrite.
3760-3770	bld sil sh.
3770-3780	blk sil sh.
3780-3790	blk sil sh, micro-mic, bituminous, tr pyrite.
3790-3800	blk sil sh, dk gy bituminous sh, v. sl. tr blk chert.
3800-3810	dk gy, micro-mic sh, tr blk sh and tr dolomitic siltstone.
3810-3820	dk gy to blk sh bituminous sh, tr brn silty, tr pyrite.
3820-3830	dk gy to gy sh, bitum w/blk sh and dolomitic, siltst.
3830-3840	dk gy bitum sh and gy sh w/dk brn dolomitic silt, tr pyrite.
3840-3850	dk gy to blk sh bitum, tr pyrite, calc in frac, tr lime.
3850-3860	brn to lt brn med hard v. foss, ls crypto-xln w/sh a.a. and 25% chky ls.
3860-3870	lt brn to brn v. foss. ls. crypto-xln w/some chky ls., tr sh, a.a.
3870-3880	lt brn to brn lime, sl argill, in part.
3880-3890	a.a.
3890-3900	a.a.
3900-3910	a.a., tr dolomite.
3910-3920	lt brn to brn, lime sl argill in part.
3920-3930	a.a.
3930-3940	dk brn ls, a.a. w/tr calc in frac.
3940-3950	dk brn and brn lime, argill in part.
3950-3960	dk brn to brn lime, argill in part, tr chalky lime, calc in fractures.
3960-3970	a.a.
3970-3980	dk brn to brn lime w/calc in frac, argill in part.
3980-3990	brn and chalky lime, argill in part, calc in frac.
3990-4000	brn and lt brn to tr chalky lime w/calc in frac.

4000-4010	No sample 4083 to 4160, nothing coming over sharer, probably drilling mudstone or marlestone. That is dissolving into the drilling mud.
4160-4170	gry sh, v. sl. tr lime. (poor sample quality)
4170-4180	a.a.
4180-4190	a.a.
4220-4230	gr sh w/tr buff lime and tr v. sl. silty.
4230-4240	gy sh w/tr buff lime w/wht soft sl. calc mudstone?
4240-4250	wht v. soft mudstone? a.a. (Cement appearance)
4250-4260	? a.a.
4260-4270	? a.a. w/tr gr shale.
4270-4280	sy sh w/tr bitum sh w/lime and mudstone?
4280-4290	lt brn to buff lime interbedded w/brn sh, mudstone? a.a.
4290-4300	interbedded sh and brn lime, a.a. w/tr mudstone.
4300-4310	interbedded lime and sh, a.a. 60-40
4310-4320	lt brn to buff lime w/gy and brn sh 30%.
4320-4330	lt brn to buff lime w/20 to 25% shale.
4330-4340	lt brn to buff lime w/tr shale.
4340-4350	brn lt brn and buff lime w/sl. tr drk gy sh and/sl. tr blk bitum shale.
4350-4360	brn and drk brn lime w/tr sh, tr bitum shale.
4360-4370	brn and drk brn lime.
4370-4380	a.a.
4380-4390	a.a. w/tr calc in fractures.
4390-4400	brn to lt brn limestone w/calc in fractures.
4400-4410	a.a., tight.
4410-4420	a.a., tight.

4420-4430	a.a., tight.
4430-4440	a.a., tight.
4440-4450	a.a., tight.
4450-4460	a.a., tight.
4460-4470	a.a., tight.
4470-4480	a.a., tight.
4480-4490	a.a., tight.
4490-4500	lt brn to brn limestone, tight.
4500-4510	br and lt br tight limestone w/tr calc in fractures, tight.
4510-4520	a.a.
4520-4530	brn limestone w/sl tr calc in fractures, tight.
4530-4540	brn to lt brn and buff limestone w/tr calc in fractures, tight.
4540-4550	a.a.
4550-4560	a.a.
4560-4620	a.a.
4620-4630	drk brn to lt brn lime, tight.
4630-4640	brn to lt brn and buff limestone
4640-4650	a.a.
4650-4660	brn tc buff lime, a.a. w/tr gy shale.
4660-4670	a.a.
4670-4680	brn to lt brn lime, 60% w/gy shale and sl. tr dolomite.
4680-4690	brn to lt brn lime, w/tr gy shale, w/v. sl. tr dolomite.
4690-4700	lt brn lime w/calc in fractures, v. sl. tr shale.
4700-4710	buff and lt brn lime w/tr shale.
4710-4720	a.a.
4720-4730	buff and lt brn lime w/tr shale, shale cavings and cement?
4730-4740	buff and lt brn lime w/tr gy shale.
4740-4750	a.a.

4750-4760	a.a.
4760-4770	a.a.
4770-4780	buff and lt brn lime w/abundant wht soft cement like ? mudstone.
4780-4790	a.a., tr mudstone.
4790-4800	a.a., tr mudstone.
4800-4810	lt brn to buff limestone.
4810-4820	a.a.
4820-4830	a.a.
4830-4840	lt brn to buff clean lime, a.a.
4840-4850	a.a.
4850-4860	buff to creamy wht lime.
4860-4870	lt brn to buff lime, tr dk gy dolomite.
4870-4880	lt brn to buff lime and creamy wht lime.
4880-4890	a.a.
4890-4900	a.a.
4900-4910	a.a.
4910-4920	a.a.
4920-4930	lt brn to buff, sl tr shale.
4930-4940	a.a.
4940-4950	buff and creamy wht lime.
4950-4960	a.a.
4960-4970	lt brn to buff.
4970-4980	lt brn to creamy wht.
4980-4990	lt brn to creamy wht.
4990-5000	creamy wht lime.

5000-5010	buff and creamy wht lime w/wht soft claystone (cmt like).
5010-5020	a.a.
5020-5030	a.a.
5030-5040	brn and lt brn to buff lime w/tr claystone and shale.
5040-5050	brn to lt brn lime w/tr shale and tr dolomite, dk brn tr claystone (cmt like).
5050-5060	lt brn to buff lime w/tr dk brn to blk calc dolomite.
5060-5070	buff and brn lime w/tr dk brn sl. dolomitic lime.
5070-5080	buff to creamy wht lime w/tr claystone, a.a.
5080-5090	lt brn to buff lime w/tr dk brn sl. dolomitic lime.
5090-5100	brn lt brn and buff lime w/20% claystone, a.a.
5100-5110	lt brn to buff lime w/tr claystone, a.a.
5110-5120	lt brn to buff limestone.
5120-5130	lt brn to brn and buff limestone.
5130-5140	a.a.
5140-5150	dk brn, brn, and buff limestone.
5150-5160	dk brn to creamy wht limestone.
5160-5170	dk brn to creamy wht limestone.
5170-5180	dk brn, brn, and buff lime, tr calcite in fractures.
5180-5190	brn micro-xln lime w/buff lime and tr calcite in fractures.
5190-5200	brn micro-xln lime w/buff crypto-xln lime, v. sl. tr calcite.
5200-5210	dk brn - brn and buff limestone.
5210-5220	dk brn sl. dolomitic lime w/30 to 40% buff lime.
5220-5230	dk brn sl. dolomitic lime w/tr buff lime.
5230-5240	dk brn sl. dolomitic lime w/tr buff lime.
5240-5250	a.a.

5250-5260	a.a.
5260-5270	dk brn to brn lime and buff lime, sl. dolomitic.
5270-5280	dk brn to brn lime, sl. dolomitic, tr buff lime.
5280-5290	brn, lt brn and buff limestone.
5290-5300	brn lt brn and buff limestone.
5300-5310	dk brn sl. dolomitic lime and tr buff lime.
5310-5320	dk brn micro-xln sl. dolomitic lime w/some buff lime.
5320-5330	brn to lt brn and buff limestone, v. sl. dolomitic.
5330-5340	lt brn to buff micro-xln lime.
5340-5350	lt brn to buff crypto-xln limestone.
5350-5360	lt brn to buff crypto-xln lime.
5360-5370	a.a.
5370-5380	lt brn to buff and creamy wht limestone.
5380-5390	a.a.
5390-5400	a.a.
5400-5410	a.a.
5410-5420	lt brn to buff - creamy wht lime w/some brn micro-xln lime.
5420-5430	buff and tr brn lime crypto-xln w/sl. tr micro-xln lime.
5430-5440	lt brn to buff lime
5440-5450	lt brn micro and crypto-xln lime and buff lime.
5450-5460	lt brn to buff and grey micro-xln lime sl. dolomitic, tight.
5460-5470	gy and brn v. fi. xln sucrosic dolomitic limestone.
5470-5480	brn lt brn and gy v. fi. xl sucrosic sl. dolomitic limestone, tight.
5480-5490	a.a.
5490-5500	gy and brn sucrosic v. fi. xln sl. dolomitic lime, tight.

5500-5510	lt brn - buff and creamy wht lime w/lt gy sucrosic dolomitic lime, v. fi. xln., tight.
5510-5520	lt brn to buff v. fi. xln. sucrosic dolomitic lime w/calc in fractures, tight.
5520-5530	gy and brn fi. xln. dolomite lime w/sucrosic appearance calc in fractures, tight.
5530-5540	gy and brn, sucrosic dolomitic lime w/calc in fractures.
5540-5550	lt gy to buff sucrosic lime sl. dolomitic w/sl. tr calc in ractures, tight.
5550-5560	lt gy to buff and lt brn lime, a.a. sl. dolomitic w/sl. tr calc in fractures, tight.
5560-5570	dk brn - brn and buff crypto-xln lime, sl. tr calc.
5570-5580	lt brn to buff and creamy wht lime.
5580-5590	lt gy to lt brn and buff crypto-xln v. fi. xln lime.
5590-5600	dk gy sl. dolomitic lime w/brn buff and cream wht lime.
5600-5610	brn to buff lime w/tr dk brn sl. dolomitic lime.
5610-5620	creamy wht - buff lt brn crypto-xln lime w/dk brn micro xl ls. (dolomite).
5620-5630	brn lt brn - buff lime w/tr dk brn dolomite.
5630-5640	lt brn to buff lime w/tr dk brn dol and dolomitic lime.
5640-5650	a.a.
5650-5660	lt brn to buff lime w/tr dk brn dolomitic lime.
5660-5670	lt brn to buff v. fi. xln lime w/tr dk brn dol and dolomitic lime.
5670-5680	lt brn to buff v. fi. xln lime w/tr dk brn dol and dolomitic lime.
5680-5690	lt brn-buff and creamy wht crypto-xln lime w/tr dk brn and brn dol and dolomitic lime.
5690-5700	lt brn and buff lime w/dk brn and brn dol and dolo lime, sl. tr wht dol.

5700-5710	lt brn to buff crypto-xln lime w/dk brn and brn dol and dolo lime.
5710-5720	buff to creamy wht crypto to fi. xln lime.
5720-5730	lt brn to buff lime v. fi. xln w/gy dolomite.
5730-5740	lt brn to buff creamy lime w/10% gy-grn dolomite.
5740-5750	lt brn to buff and creamy lime w/tr gy grn dolomite and dolomitic lime.
5750-5760	brn to lt brn and buff and creamy lime, sl. dolomitic in part.
5760-5770	buff and creamy wht lime w/dk gy lime and gy grn dol 5%.
5770-5780	buff micro-xln lime w/creamy wht lime.
5780-5790	buff brn and creamy lime, dolomitic in part.
5790-5800	buff and creamy limestone, tr. brn lime.
5800-5810	a.a.
5810-5820	buff and creamy limestone w/tr brn limestone.
5820-5830	buff and creamy limestone w/tr brn lime.
5830-5840	buff and creamy wht lime w/tr brn dol and dolomitic in part.
5840-5850	brn lt brn and buff lime, dolomitic in part, tr dk brn dol.
5850-5860	creamy wht v. fi. xln dol sl. calc w/tr lime, tight.
5860-5870	creamy wht v. fi. xln dol, sl. calc., tight.
5870-5880	creamy wht v. fi. xln dol, sl. calc., tight.
5880-5890	brn and buff lime w/wht fi. xln dol, a.a., tight.
5890-5900	brn lt brn dolomite, creamy dol w/lt brn to buff lime, tight.
5900-5910	dk brn to buff and gy lime and dolomite, tight.
5910-5920	dk brn to brn lime w/tr creamy wht fi. xln dol.
5920-5930	dk brn to buff lime w/sl. tr dol.
5930-5940	dk brn and brn limestone w/tr buff and creamy lime.
5940-5950	dk brn to buff limestone.

5950-5960	dk brn - brn and buff lime v. sl. tr dol.
5960-5970	lt brn to buff lime, tr. sh, gy-grn, waxy.
5970-5980	lt brn to buff lime, micro and fi. xln.
5980-5990	brn buff and creamy wht lime.
5990-6000	brn - dk brn to buff lime.
6000-6010	lt gy and bf fx dol calc, tr grn sh, micropyrite.
6010-6020	lt gy and bf fx dol and ls, a.a.
6020-6030	brn buff and creamy wht ls, w/tr dol.
6030-6040	dk brn to buff lime and gy lime, w/tr calcite.
6040-6050	dk brn to buff lime w/tr buff fx dol.
6050-6100	see detailed core description.
6100-6110	ls, bf-brn, chalky, clean, tight, 50% dol, gy microx, dense, sl. calc.
6110-6120	ls, bf-brn, chalky, a.a., platy, microx, in pt dk brn, minor vfx dol, lt gy, tight.
6120-6130	ls, brn, a.a. and 20% dol, v.fx, tight, a.a., no foss.
6130-6140	dol, lt gy, clean vfx, tight and 20% ls, brn, in pt wh, lithographic, dense.
6140-6150	dol, a.a., minor ls, a.a., platy.
6150-6160	dol, a.a., minor ls, brn and dk gy, litho, sl. arg, tight.
6160-6170	dol, crm-bf, vfx, clean, tight and minor ls, a.a.
6170-6180	dol, a.a., in part sli calc, and ls, platy, a.a. tight.
6180-6190	dol and ls. a.a., 50:50, ls partly chalky.
6190-6200	dol, crm-bf, microx, tight and ls, platy, brn, sub lithographic, occ calcite vein.
6200-6210	ls, bf, litho, dk gy, sl. arg, tight and minor dol, crm, vfx a.a. and tr sh, grn, sl. dol, micropyritic.
6210-6220	ls, bf, litho and dk gy, microx, a.a., tr dol, sl. calc, and sh, lt. grn, micropyritic.

6220-6230	ls, bf, dk gy, a.a., some sparry calcite, minor dol, a.a. v. sl. tr sh, lt. grn, stylolites.
6230-6240	interbedded ls and dol, a.a. 5% lt grn, waxy, sh, micropyr, tight.
6240-6250	ls, bf, lithogr and dk gy, vfx, 30% dol, tr sh, a.a., stylolites.
6250-6260	dol, lt gy, vfx, euhedral, interlocking, tight, arg, minor ls litho, calcite veins.
6260-6270	dol, a.a., in part euhedral, 20% ls, a.a., platy, tight.
6270-6280	ls, dol 50:50 a.a., <5% lt grn sh.
6280-6290	ls, 80%, bf, litho, and dk gy, sl arg, vfx, 20% dol, lt gy, vfx tight, tr grn sl.
6290-6300	dol, lt gy, sucrosic, vfx, tight, 40% ls, dk gy, microx, and bf, lithogr, dense, tr grn sl.
6300-6310	dol, lt gy, vf-fx, clean, euhedral, tight, in part med gy, sl arg.
6310-6320	dol, lt gy, sucrosic vfx and in part dk gy a.a., tr ls, bf, litho, tight (v. cm m bly spl).
6320-6330	dol, lt gy, sucrosic, vfx, sl calc, clean, tight, 25% ls, dk gy, microx, v. sl. arg.
6330-6340	dol and ls, a.a. 3:1, tr lt grn sh, pyr, 5% sh, lt grn, pyr.
6340-6350	ls, bf, litho and dk gy, microx, arg, dense - 40% dol (1-2% interx ϕ), lt gy, vfx, euhedral, tight.
6350-6360	dol and ls 50:50, a.a., some ls, wh, chalky, tight.
6360-6370	dol and ls, a.a., tight, tr grn sh.
6370-6380	dol, lt gy, vf-fx, in part calc, tight, clean and minor ls bf, litho, and dk gy, microx, arg, 2nd calcite.
6380-6400	no returns.
6400-6410	ls, lt gy-brn, dense, vfx, tight, sl dol, pyr, 30% coarse, wh calcite, some dk gy microx ls, arg.
6410-6420	dol, crm-lt gy, vfx, sl calc, tight, minor ls, dk gy, arg, part litho, 20% calcite, a.a. fractured.

6420-6430	dol, med gy, some crm, vf-fx, sl arg, sl calc, tight, fractured 2nd calcite, stylolites, pyr, tr ls. a.a.
6430-6440	dol, gy-brn, vfx-fx, euhedral, argstk, sl calc, tight, 20% coarsex calcite.
6440-6450	dol, a.a., tight, minor dk gy-brn, litho, ls, tr pyr, 30% calcite, fractured.
6450-6460	dol, lt gy-tan, vf-fx, partly arg, sl calc, tight, minor ls, a.a., pyr, tr bitumen? 30% calcite, a.a.
6460-6470	dol, a.a., tight, tr ls, dk gy, sl arg, tight, tr sh, grn, waxy, dol and calcite, a.a.
6470-6480	dol, lt gy-tan, vfx-fx, clean, tight, tr ls, a.a., tr grn sh 10% wh calcite.
6480-6490	dol, a.a.?, coral fragment (colonial), euhedral, interlocking 10% ls, arg, a.a., sec calcite, tr grn sh.
6490-6500	dol, crm-tan, vfx, clean, tight, tr ls, dk gy, arg, partly litho, fractured.
6500-6510	ls, bf, litho, dense and dk gy, microx, arg, 10% sh, lt grn sl dol, pyr.
6510-6520	ls, a.a., tight, stylolites, tr sh, a.a., pyr.
6520-6530	ls, bf, litho, and dk gy, arg and tr crm chalky, tr grn sh.
6530-6540	ls, a.a., 20% calcite, tr grn sl.
6540-6550	ls, a.a., minor dol, lt gy-tan, vfx, calc, tight, calcite.
6550-6560	dol, lt gy-bf, clean, dense, vfx, minor ls, bf, litho, 10% wh calcite.
6560-6570	dol, bf, tight, a.a., tr ls, a.a., and dk gy, arg. see calcite.
6570-6580	ls, bf, litho, and dk gy, arg, tight, 50% dol, a.a., calc, tr sec calcite and grn sl.
6580-6590	dol, bf, micro-vfx, clean, 25% ls, a.a., spl v. finely broken up.
6590-6600	dol, a.a., calc, v. soft, and ls, a.a. 25% and sec calcite.
6600-6610	dol, bf, vfx, tight, minor ls, dk gy, microx, tr grn sh, minor see calcite.
6610-6620	dol, a.a., some dk gy, microx, calc and see calcite.

6620-6630	dol, a.a., minor ls, bf, litho, 10% gy-grn sh, fractures.
6630-6640	dol, 60%, bf in part dk gy, microx, part arg, tight 40% ls, bf, dense and sec calcite xals.
6640-6650	dol, bf-gy, soft, micro-vfx, tight, partly calc, minor ls, bt, dol, litho.
6650-6660	no samples carring over shaker.
6660-6670	a.a.
6670-6680	a.a.
6680-6690	a.a.
6690-6700	ls, bf, litho, dense, in part dk gy, microx, 40% dol, bf, vfx, tight, tr grn sh.
6700-6710	no samples.
6710-6720	no samples.
6720-6730	dol, bf, vfx, slcalc, tight, 50% ls, bf, litho, and dk gy, microx, sl arg, dol, dense, tr grn sh, micropyr.
6730-6740	dol, a.a., rare streaks ϕ, 40% ls, a.a., dol, tr grn sh.
6740-6750	dol, lt gy-bf, vfx, in part calc, tr ls, bf, litho, sec calcite.
6750-6760	dol, lt brn-gy, vf-fx, some euhedral, calc in part, tight, minor bf ls, dense sl tr grn sh, see calcite.
6760-6770	dol, a.a. minor ls, a.a., tr sh, lt grn, pyrite, see calcite.
6770-6780	dol, bf, sucrosic, vfx, dk gy, microx, sl calc, tight, tr ls, bf, [illegible], fractured carbonaceous inclines.
6780-6790	dol, lt gy-bf, dk gy, a.a. tight, v. sl. tr sh, fractured.
6790-6800	dol, med brn-gy, microx, sl arg, and bf, suc, vfx, streaky ϕ interx, free dolxals ? vugs, fractured.
6800-6810	dol, dk gy, microx, sl arg, bf, tr 2-3% streaks interx ϕ, fractures.
6810-6820	dol, v. dk gy and bf, a.a., fractures.
6820-6830	dol, dk gy, metallic, sl calc, fractured, bf, suc, vfx, free dol xals - bituminous (no cmt)

6830-6840	dol, dk gy-brn, sl calc, micro-vfx, tight, interbedded bf, dol, a.a., fractured, stylolites.
6840-6850	dol, med/dk brn gy, in part bf, sub euhedral, bituminous streaks, rare ~2% inter ϕ.
6850-6860	dol, dk gy-brn, microx and bf, sucrosic, vfx, bit strks, interlocking xals, fractures.
6860-6890	Not analyzed.
6890-6900	dol, dk gy, a.a. and lt gy, vfx, interlicking, calc, tight, see calcite.
6900-6910	dol, bf-lt gy, sucrosic, rare vug, vfx and dk gy, dense, a.a. tr lt grn sl, micropyr and sec calc in fractures.
6910-6920	dol, bf-lt gy, vfx, sl calc and dk gy, a.a. fractured.
6920-6930	dol, bf-lt gy, a.a. some coarse dol, calcite xals (vugs), sl calc vfx fractured.
6930-6940	dol, a.a., calcite ,bf, enhedral dol xals from vugs - rare.
6940-6950	dol, bf, sucrosic, vfx, rare vug, calcite.
6950-6960	dol, a.a., rare vug, otherwise tight, calcite.
6960-6970	dol, dk gy-brn, dense, microx, tight, lt gy, suc, vfx, sl calc, fractured.
6970-6980	dol, dk gy, bf-lt gy, a.a. bf dol xals, limst vug, otherwise tight, see calcite.
6980-6990	dol, dk gy-brn, dense, microx, minor bf-crm dol, interlocking xals in part, fractured.
6990-7000	dol, a.a., tight, see calcite.
7000-7010	dol, dk brn-gy, microx, dense, sl arg, and minor bf vf-fx dol, tight, fractured.
7010-7020	dol, dk gy-brn, a.a. and crm-bf, fx, sucrosic in part, pyr, tight, fractured.
7020-7030	dol, dk gy, a.a. and bf-lt gy, suc, fx, pyr, tight, fractured.
7030-7040	dol, dk gy, microx, in part calc, and bf, dol, a.a. euhedral dol xals -? from vug 2nd calcite.

7040-7050	dol, dk gy, sl arg, in part calc, and crm-bf dol, fx interlocking tight, pyr coarse calcite xtals.
7050-7060	dol, dk gy and bf, a.a.
7060-7070	dol, dk gy, microx, dense and dol bf-crm, fx, bl bit streaks, tight, see calcite xals.
7070-7080	dol, a.a. partly arg, fractured.
7080-7090	dol, dk gy, micro-vfx, dense, sl arg, minor bf dol, sl calc, fx, in part euhedral, tight, rare vug, fractured.
7090-7100	dol, dk gy, a.a., minor bf dol, a.a., coarse sec calcite, pyr, bituminous inds.
7100-7110	a.a.
7110-7120	dol, dk gy, minor bf, a.a., abwt wh calcite.
7120-7130	minor dk gy dol, a.a. and dol, wh, occ rounded clr qtz grns, microx, fx interlocking, calc, dense, tight, fractured.
7130-7140	dol, wh glassy, dense, rounded qtz grns, part euhedral, part suc, minor dk gy arg dol, bit incl calc.
7140-7150	dol, wh, floating qtz grns, sl calc, a.a.,minor dk gy dol, a.a., tight, fractured.
7150-7160	dol, a.a.
7160-7170	dol, wh-lt gy, in part microx dense and fx, interlocking xals., bit incls, tight, qtz grns, see calcite.
7170-7180	dol, wh-lt gy, dense, fx, clean, tight, pyr, floating qtz gns, minor dk gy arg dol, tight.
7180-7190	dol, wh, fx, part medx, a.a., minor dk gy arg, tight, tr pyr, a bituminous incls.
7190-7200	dol, wh, dense, clean fx, interlocking, tight, tr pyrite, tr dk gy arg dol.
7200-7210	dol, wh, aa, tr dk gy, a.a.
7210-7220	dol, wh, dense, fx, occ floating qtz grn, tight.
7220-7230	dol, wh-lt gy, part microx w/fx lenses, clean, tight.
7230-7240	dol, a.a. tight.

7240-7250	dol, wh-lt gy, clean fx, tight, tr pyrite.
7250-7260	dol, a.a. tight.
7260-7270	a.a.
7270-7280	dol, wh-lt gy, clean, dense, part microx part fx, tight, tr sec calcite.
7280-7290	dol, wh, a.a., tr dol, dk gy, sl arg, calc, tight, pyrite.
7290-7300	dol, wh, dense, microx, some fx interlocking, pyrite, tr dk gy, a.a.
7300-7310	dol, wh-bf, clean, microx, tight.
7310-7320	dol,a.a.
7320-7330	a.a., tight.
7330-7340	dol, wh-bf, dense, clean, microx, tight, fractured.
7340-7350	dol, lt gy-bf, micro-vfx, anhedral, tight, tr pyrite, see calcite.
7350-7360	dol, a.a., pyr, calcite.
7360-7370	a.a., tight.
7370-7380	dol, lt gy-bf, dense, microx, anhedral, tight, tr sec calcite.
7380-7390	dol, a.a.
7390-7400	dol, a.a., tight.
7400-7410	dol, lt gy-bf, clean, dense, microx, anhedral, rare tr ppr ϕ, tr dk gy dol, sl calc.
7410-7420	dol, gy-bf, dense, a.a.
7420-7430	dol, a.a., tr dol, dk gy, sl arg, tight.
7430-7440	dol, tan, microx, dense)
7440-7450	a.a.) v. poor samples after trip (7465) bit worn out.
7450-7460	powdered spl - dol.)
7460-7470	dol, lt gy-tan, microx, anhedral, dense, tight, tr dk gy dol, sl calc, pyrite.
7470-7480	dol, lt gy-bf, dense, a.a. tr sec calcite.

7480-7490	dol, a.a.
7490-7500	dol, bf, clean, dense, microx, tight, rare euhedral xals from vug, tr dk gy calc dol, sl arg.
7500-7510	dol, tan, a.a., tight, occ euhedral xal, tr pyrite.
7510-7520	dol, tan, clean, microx, dense.
7520-7530	dol, a.a.
7530-7540	a.a.
7540-7550	dol, tan, dense, tight, a.a.
7550-7560	dol, tan, microx, dense, rare euhedral xals.
7560-7570	dol, lt gy-bf, microx, clean, tight, som fx, interlocking, fractured.
7570-7580	dol, a.a., minor dk gy, sl arg, see calcite.
7580-7590	dol, lt gy and tan, dense, tr pyrite.
7590-7600	dol, a.a., minor crm dol, sucrosic, vfx, calc, pyrite.
7600-7610	dol, tan, dense, anhedral, minor crm sucrosic, a.a., tight, dissem pyrite.
7610-7620	dol, tan and crm, a.a., tr pyrite, fractured.
7620-7630	dol, a.a., tight.
7630-7640	dol, tan, dense and crm, sucrosic vfx, tight, fractured.
7640-7650	a.a., minor dk gy, microx, sl arg dol.
7650-7660	dol, tan, dense, minor crm sucrosic, vfx, and dk gy, microx, tight, pyrite.
7660-7670	a.a.
7670-7680	dol, lt gy, microx, dense, and crm, vfx, sucrosic, tight.
7680-7690	dol, a.a.
7690-7700	a.a., pyrite.
7700-7710	dol, tan, clean, dense, microx, anhedral, minor crm, sucrosic vfx.
7710-7720	dol, a.a. minor dk gy, microx, sl arg, fractures.

7720-7730	dol, a.a. tight, pyrite, fractures.
7730-7740	dol, tan and crm, a.a.
7740-7750	dol, tan, dense, microx, anhedral, tight, tr crm sucrosic, vfx, pyrite.
7750-7760	a.a.
7760-7770	dol, tan and crm, a.a., tr dk gy, sl arg, microx, tight.
7770-7780	dol, tan, and crm a.a., tight, sl arg in part.
7780-7790	dol, tan, hard, dense, anhedral, and crm, vfx, sucrosic, tr dk gy dol, microx, sl arg, pyrite.
7790-7800	dol, a.a., tight, see calcite xals.
7800-7810	dol, crm and tan, microx, tight and gy microx, arg, see calcite.
7810-7820	dol, wh-crm, vfx, part f-mx interlocking, dense, tight, minor tan dol, microx and gy arg.
7820-7830	dol, part crm a.a., part gy-tan, microx, sl arg.
7830-7840	dol, crm and tan, a.a. tight, minor f-mx, interlocking, see calcite.
7840-7850	dol, wh, vfx, sucrosic, sl calc, tight, 20% chert, dullm milky, wh, minor gy-brn dol, sl arg.
7850-7860	dol, wh and tan, vfx, part arg, sl calc, tight pyrite, 20% chert.
7860-7870	dol, a.a., arg streaks, minor chert, wh, milky.
7870-7880	dol, tan, and crm, arg streaks, tr wh chert, tr lt grn sh, micropyritic.
7880-7890	dol, a.a., tr wh chert.
7890-7900	dol, wh, tan, microx, tight, 10% chert, tr dk gy sl.
7900-7910	dol, a.a., tr milky, wh chert.
7910-7920	dol, crm-tan, micro-vfx, dense, part arg, < 20% wh chert interbeds, pyrite.
7920-7930	dol, crm, vfx, part sucrosic, tight, tan-brn, microx, dense sl calc.
7930-7940	dol, crm and tan, sl calc, tight, arg streaks.
7940-7950	dol, wt-crm, vfx-fx, clean, sucrosic, minor tan, microx, st tr chert.

7950-7960	dol, wt-crm, a.a., tight and tan, a.a., tr chert and pyrite.
7960-7970	dol, crm and tan, a.a., dense, pyrite.
7970-7980	dol, wt-tan, microx, dense, tight, part sucrosic.
7980-7990	dol, tan-gy, dense, a.a., crm-wt, micro-vfx, sucrosic, tight, see calcite fractures.
7990-8000	dol, tan and crm, a.a., minor dk gy, arg, sec calcite.
8000-8010	dol, tan, microx, dense, dk gy, microx, arg, dense dol.
8010-8020	dol, tan tr dk gy arg, vfx, minor crm, vfx, sucrosic, tight.
8020-8030	dol, a.a., tr clear well formed qtz xals? fract vug and fracture.
8030-8040	dol, gy-bf, part dk gy arg, tight.
8040-8050	dol, gy-bf, micro-vfx, dense, dk gy microx, v arg.
8050-8060	dol, a.a., tight.
8060-8070	dol, bf, a.a., minor lt gy, vfx suc, dk gy, dense, v arg, fractured, pyrite, tr ix ϕ - rare.
8070-8080	dol, gy,microx, arg, dense, minor crm-lt gy, sucrosic, vfx, clean, rare tr ix ϕ 1-2%, tr bl sh.
8080-8090	dol, gy, arg, minor crm lt gy, tight and fractured.
8090-8100	dol, gy, platy, arg, tight, minor lt gy, vfx tight, fractured.
8100-8110	dol, a.a., sec calcite.
8110-8120	dol, gy, microx, arg, dense, lt gy-bf, vfx, part sucrosic.
8120-8130	dol, a.a., tight.
8130-8140	dol. lt gy-bf, micro-vfx, clean, minor dk gy dol., tight, tr pyrite.
8140-8150	dol, a.a., rare sh, gy-grn.
8150-8160	dol, wh-bf, microx, tight.
8160-8170	dol, a.a., tight.
8170-8180	dol, crm-bf, microx, dense, tight, sl tr gy sh.
8180-8190	dol, bf, a.a.

8190-8200	a.a.
8200-8210	dol, bf, microx, anhedral, tight, sl arg.
8210-8220	a.a.
8220-8230	a.a.
8230-8240	dol, bf-gy,micro-vfx, dense, sl arg, tight.
8240-8250	dol, bf-gy, arg and minor wh, clean, microx, tight.
8250-8260	dol, crm-bf, gy, micro-vfx, dense, calcite veins.
8260-8270	dol, a.a., arg, calcite veins.
8270-8280	dol, bf-gy, arg, rare sh streak.
8280-8290	dol, a.a. and wh-crm, micro-fx, occ rounded qtz. grain.
8290-8300	dol, crm-bf, tight, minor dk gy, arg, dense.
8300-8310	dol, a.a., tight, calcite veins.
8310-8320	dol, crm-bf, microx, dense, rare floating qtz grns.
8320-8330	dol, a.a., fractured.
8330-8340	dol, crm-gy bf, vfx, part arg, dense, tight.
8340-8350	dol. a.a.
8350-8360	dol, lt gy-bf,dense, vfx, in part arg, tight, calcite veins.
8360-8370	dol, a.a. (trip sample)
8370-8380	dol, bf, dense, microx and lt gy, sucrosic, vfx.
8380-8390	dol, dense, lt gy-bf.
8390-8400	dol, a.a., rare v. dk gy sl.
8400-8410	dol, lt gy-bf, dense, micro-vfx, tight, tr dk gy, microx, dense, sl arg.
8410-8420	dol, a.a.
8420-8430	dol, crm-lt gy,microx, part vfx, sucrosic, tight, minor dk gy sl arg, sec calcite.
8430-8440	dol, crm-lt gy and minor dk gy, a.a. tight.

8440-8450	dol, a.a., arg streaks, tr diss pyrite.
8450-8460	dol, bf, vfx, part sucrosic, tight.
8460-8470	dol, a.a., rare tr ppv ∅, tr dk gy dol, microx, sl arg, tr pyrite.
8470-8480	dol, crm, vfx, sucrosic, tight, minor bf, microx, dense, dk gy arg.
8480-8490	dol, a.a., dense.
8490-8500	dol, bf-gy, micro-vfx, in part arg, tight.
8500-8510	a.a.
8510-8520	dol, lt gy-bf, micro-vfx, dense, sl arg, tight.
8520-8530	dol, a.a., tr pyrite, sec calcite.
8530-8540	dol, bf, microx, dense.
8540-8550	dol, bf, a.a., minor dk gy arg, rare dk gy sl stringers, tight, pyrite, sec calcite common.
8550-8560	dol, a.a., rare tr sl, dk gy, pyrite, abwt wh calcite fract.
8560-8570	dol, bf, microx-vfx, part sucrosic, minor dk gy, sl arg, calcite common.
8570-8580	dol, a.a., minor calcite, pyrite.
8580-8590	dol, a.a., calcite veins, pyrite.
8590-8600	dol, bf-dk gy, dense, part arg, tight, sec calcite, pyrite.
8600-8610	dol, a.a., fractured.
8610-8620	dol, a.a., tr wh fx, interlocking, dense, arg streaks, frac. pyritized.
8620-8630	dol, dk gy, microx, arg, pyr, minor lt gy-bf, clean, microx, tight, sec calcite.
8630-8640	dol, dk gy and bf, tight, a.a.
8640-8650	dol, a.a. patches fx interlocking, rare tr bl sh, tr calcite.
8650-8660	dol, crm-lt gy, vfx, some fx, dense, tight, minor dk gy, arg, tr sec calcite.
8660-8670	dol, a.a., coarse sec calcite.

8670-8680	dol, gy, dense, vfx, in part fx, interlocking, part dk gy arg, pyrite, slickersides, calcite.
8680-8690	dol, a.a., tight, fractured.
8690-8700	dol, gy, dense, sl arg.
8700-8710	dol, a.a., rare streak ∅ ppv, abwt calcite.
8710-8720	
8720-8730	stuck in hole - abwt cavings.
8730-8740	
8740-8750	
8750-8760	dol, dk gy, micro, arg, interbd lt gy, microx, dense, platy, calcite common.
8760-8770	dol, dk gy, a.a., arg streaks and lt gy, vfx, in part sucrosic, pyrite, sec calcite, fossil fragment.
8770-8780	dol, dk gy and lt gy, micro-fx, tight, a.a., occ clear dolxals from open fracture or vug, pyrite.
8780-8790	dol, med-dk gy, sl arg, microx, hard, dense, pyrite, frac., occ coarse dol xals.
8790-8800	dol, a.a., fractured, pyrite.
8800-8810	dol, gy, arg, hard, tight, fractured, pyrite.
8810-8820	a.a.
8820-8830	dol, gy, hard, dense, arg, microx, tight, fractured, occ subeuhedral dol, mx.
8830-8840	dol, a.a., occ bf mx - coarse xals, a.a., sec calcite.
8840-8850	no samples
8850-8860	no samples - driller thought he was reaming!
8860-8870	(probably missing 8760-90)
8880-8890	dol, gy, hard, dense, vf, same fx, tight, carbonaceous strks. tr pyrite, fractured.
8890-8900	dol, gy, hard, anhedral, a.a., tr sec calcite.
8900-8910	dol, a.a. and fx, gy, subeuhedral, tight, tr calcite.

8910-8920	dol, lt-med gy, dense, micro and vfx, tight, fractured.
8920-8930	dol, gy, hard, microx, in part vf-fx, subeuhedral, tight, fractured.
8930-8940	dol, a.a., tight, arg strk, 40% wh calcite.
8940-8950	dol, a.a., minor coarse, bf, dol, anhedral and sec calcite.
8950-8960	dol, gy, hard, dense, vfx, tight, abwt wh, med-coarse dol, anhedral in part, tight, tr calcite.
8960-8970	dol, wh, dense, med x, anhedral, tight, minor gy, a.a., tr pyrite and tr calcite.
8970-8980	dol, wh and gy, a.a. tight.
8980-8990	dol, wh, med-coarse x, clean, tight, minor dk gy vfx, pyrite.
8990-9000	dol, wh, minor gy, a.a., disseminated pyrite.
9000-9010	dol, wh, coarse, interlocking, tight, 20% gy, microx, dense, diss. pyrite, rare anhyd, wh, streak.
9010-9020	dol, wh, a.a. and gy, a.a., tight, pyrite.
9020-9030	dol,lt gy, microx, dense, and wh, a.a., 20% interbd gy dol. vfx, sl arg, tight.
9030-9040	dol, a.a., tight.
9040-9050	dol, gy and wh, part platy, microx, dense, minor wh, med x, tight, anhedral, tr diss pyrite.
9050-9060	dol, gy and wh, a.a., occ calcite veins.
9060-9070	dol, lt-med gy, microx, dense, minor wh, med x, interlocking, tight, tr pyrite.
9070-9080	dol, a.a., calcite veins.
9080-9090	dol, a.a., rare arg streaks.
9090-9100	dol, lt-med gy, dense, microx, tight, calcite vein.
9100-9110	dol, a.a., rare arg streak.
9110-9120	dol, gy, dense, tight.
9120-9130	a.a., disseminated pyrite.

9130-9140	dol, gy, dense, microx, tight.
9140-9150	dol, a.a., occ fracture.
9150-9160	dol, lt-med gy, micro-vfx, dense, tight, occ calcite vein.
9160-9170	dol, a.a., rare bl sl stringers, pyrite.
9170-9180	dol, gy, dense, a.a., rare tr sh.
9180-9190	dol. a.a.
9190-9200	dol, lt and med gy, microx, dense, sl tr bl shale, pyrite.
9200-9210	dol, dense, a.a., occ calcite vein.
9210-9220	dol, wh and lt gy, micro and vfx, tight, tr diss pyrite.
9220-9230	dol, a.a., tr pyrite.
9230-9240	dol, gy, dense, anhedral, tight, tr disseminated pyrite.
9240-9250	dol, a.a., tr dk gy, microx, rare carbonaceous streak, tight.
9250-9260	dol, gy, microx, hard, dense, anhedral
9260-9270	dol, a.a., rare tr bl sh, pyrite, occ wh sec calcite.
9270-9280	dol, lt-med gy, microx, dense.
9280-9290	dol, lt and dk gy, crypto x, dense, part arg.
9290-9300	dol, gy, hard, microx, dense, tr pyrite.
9300-9310	dol, a.a., tight.
9310-9320	dol, lt and dk gy, cx and microx, dense, tight, tr pyrite, sec calcite.
9320-9330	dol, wh-lt gy, and dk gy, cx - vfx, dense, hard in part arg, rare tr blsl, sec calcite.
9330-9340	dol, lt-gy, cx, dense, minor dk gy, micro-vfx, arg, tight, tr pyrite, fractured, occ qtz xals.
9340-9350	dol, a.a.,minor wh, vf-fx, sub euhedral, tight, tr pyrite, qtz and sec calcite.
9350-9360	dol, lt-dk gy, cx-microx, sl arg, strks, and wh vf-fx, dense, tr pyrite, floating qtz, fractured.

9360-9370	dol, a.a., clear floating qtz grns, sub rounded, calcite in fractures, pyrite.
9370-9380	dol, gy, dense, microx, 30% ss, wh-lt gy, fgr, partly consolidated, pyrite, rare tr dol cmt.
9380-9390	dol, a.a. 30% qtzite, wh hard, fgr, a.a., occ clear well developed qtz xals? fracture or vug.
9390-9400	qtzite, wh-lt gy, vf-fgr, speckled, pyritic, partly consolidated, minor dol, gy, dense, tight.
9400-9410	qtzite, wh-lt gy, fgr, a.a., pyrite, tr dol, a.a.

MUD FILTRATE ANALYSES

FOR

AMOCO CANADA PETROLEUM COMPANY LTD.

AMOCO PCP A-1 CRANSWICK A-22
WILDCAT
NORTHWEST TERRITORIES

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

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering

P.O. BOX 5670, POSTAL STATION "A"
CALGARY 9, ALBERTA
TELEPHONE: 253-3391

COMPANY	Amoco Canada Petroleum Corporation	PAGE	1 of 1
WELL	Amoco PCP A-1 Cranswick A-22	FILE	933-2438
FIELD	Wildcat, Northwest Territories	GRD. ELEVATION	2500'
LOCATION	65 31' 01.00 N.L. 131 48' 55.00 W.L.		

Mud Filtrate Analysis

Sampled From	Resistivity (Ohm-meters)	Chloride (mg/liter)
Sample #1 (Flow Line Pump-Collected Prior to DST) March 20, 1972	5.79	29
Sample #2 (Flow Line Pump-Collected Prior to DST) March 20, 1972	5.90	29
Mud in hole - Prior to test at T.D. March 23, 1972	4.79	15
DST #1 (Drill Stem Bottom) Ronning Formation March 24, 1972	5.08	15

FORMATION TESTING

Technical Report

COMPANY AMOCO CANADA PETROLEUM CO. LTD.

WELL NAME AND NUMBER AMOCO PCP A-1 CRANSWICK A-22

FIELD OR AREA CRANSWICK

PROVINCE OR TERRITORY

LEGAL LOCATION 65-31-10-7-W5

TEST

TESTED

CALGARY, ALBERTA

A Halliburton Company

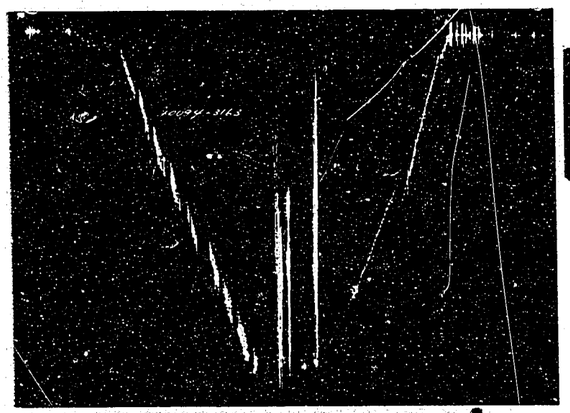
EQUIPMENT DATA

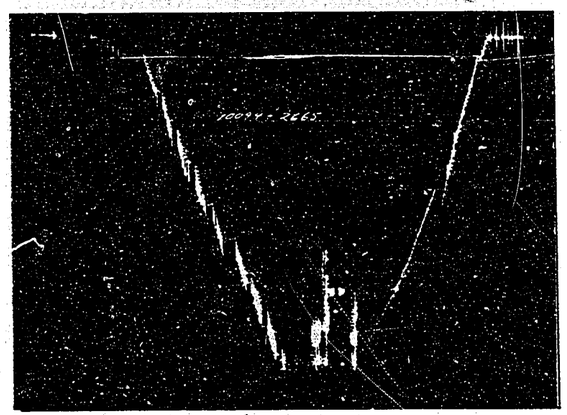
	OD	LENGTH
Reversing Sub	6 1/4"	1.0'
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters		
Handling Sub & Choke		
Dual CIP Valve	5.0"	6.5'
Dual CIP Sampler		
Hydrospring Tester	5.0"	5.0'
DEPTH		
Multiple CIP Sampler		
Extension Joint		
BT Running Case	5.0"	4'
DEPTH		
HT-500 Temp. Recorder	5.0"	1.5'
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		8454
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		8462
Flush Joint Anchor	5.0"	5.0'
Crossover Adapter	5.0"	1.0'
Blanked-Off BT Case	5.0"	4.0'
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	7 1/2"	5.0'
DEPTH		8475
Drill Collars & Adapters		
Flush Joint Anchor		
Blanked-Off BT Case		
DEPTH		

PRESSURE

TIME

Each horizontal line equal to 1000 psi





TEMPERATURE RECORD

Each concentric line equals 10° F. Temperature increases outwardly

Ticket No. 10094

Temperature Range °F

150 °F to 250 °F

A to B — Initial CIP

B to C — 2nd Flow

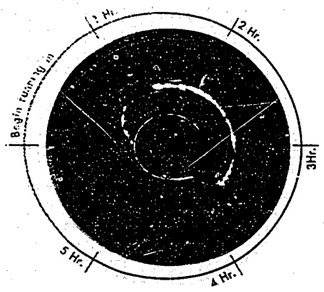
C to D — Final CIP

A _____ °F

B _____ °F

C MAX °F

D 188 °F



FORM 418

Halliburton SERVICES LIMITED

FORMATION TESTING DATA SHEET

REFER TO INVOICE NO. 10094

HALLIBURTON DISTRICT: Edmonton

JOB DATE: March 24, 1972

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	3163		2665
GAUGE DEPTH	8438		8470
PLANTED OFF	NO	YES/NO	YES
FOUR CLOCK TRAVEL	12 hr.		12 hr.
INITIAL HYDROSTATIC	3775		3788
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	3764		3780

TYPE OF TEST	Bottom Hole
TESTER	B. Bjornson
EMPL. NO.	140
WITNESS	R. Carstairs
DRILLING CONTRACTOR	Bawden #31

EQUIPMENT AND WELL DATA

FORMATION TESTED	GAUGE DEPTH 188 TEMPERATURE 40F MEAS. OF EST.
NET PRODUCTIVE THICKNESS FT.	MUD TYPE Gel
K B ELEVATION	MUD WEIGHT 8.6 MUD VISC. 50
ALL DEPTHS MEASURED FROM ☑ KB ☐ GROUND	CASING OR HOLE SIZE 8 1/2"
PACKER DEPTHS TOP 8462 BOTTOM	RATHOLE SIZE N/A
DEPTH OF TESTER VALVE 8427	DRILL PIPE OD 5" WEIGHT 19.5
CASING PERFORATED INTERVAL N/A	DRILL COLLARS ABOVE TESTER ID 2 3/4" LENGTH
TOTAL DEPTH 9411	SURFACE CHOKE 1.0"
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 5/8"

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/SP. GR. 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				TESTER OPENED		
CLOSED IN				PACKER UNSEATED		

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
1300	Drilling Mud
1300	TOTAL LIQUID RECOVERY

RECOVERED FROM TESTER VALVE

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. Side wall anchor let go when hydrospring opened. Unsuccessful 7 times.

FORM 344B

5C

COMPANY: AMOCO CANADA PETROLEUM CO. LTD.

LEGAL DESCRIPTION: 65-31-101-00 W4M 131 48 155 00

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: CRANSWICK

WELL NAME AND NUMBER: AMOCO PCP A-1 CRANSWICK A-22

TEST NUMBER: 1

TESTED INTERVAL: 8462 - 9411

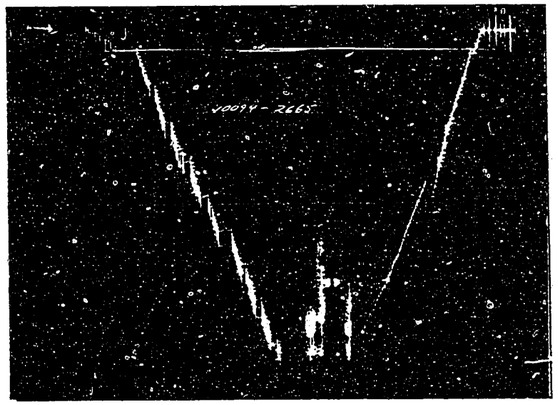
EQUIPMENT DATA

	OD	LENGTH
Reversing Sub	6 1/4"	1.0'
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters		
Handling Sub & Choke		
Dual CIP Valve	5.0"	6.5'
Dual CIP Sampler		
Hydrospring Tester	5.0"	5.0'
DEPTH		
Multiple CIP Sampler		
Extension Joint		
BT Running Case	5.0"	4'
DEPTH		
HT-500 Temp. Recorder	5.0"	1.5'
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		8454
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		8462
Flush Joint Anchor	5.0"	5.0'
Crossover Adapter	5.0"	1.0'
Blanked-Off BT Case	5.0"	4.0'
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	7 1/2"	5.0'
DEPTH		8475
Drill Collars & Adapters		
Flush Joint Anchor		
Blanked-Off BT Case		
DEPTH		

PRESSURE

TIME

Each horizontal line equal to 1000 psi

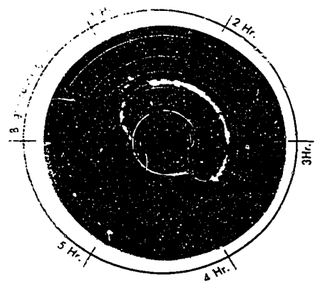


TEMPERATURE RECORD

Each concentric line equals 10° F. Temperature increases outwardly.
Ticket No. 10094
Temperature Range 150 °F to 250 °F

A to B — Initial CIP
B to C — 2nd Flow
C to D — Final CIP

A _____ °F
B _____ °F
C MAX °F
D 188 °F



FORM 418

Halliburton SERVICES LIMITED

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO 10094

HALLIBURTON DISTRICT: Edmonton

JOB DATE: March 24, 1972

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	3163		2665
GAUGE DEPTH	8438		8470
PLANTED OFF	NO	YES/NO	YES
OUR CLOCK TRAVEL	12 hr.		12 hr.
INITIAL HYDROSTATIC	3775		3788
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	3764		3780

TYPE OF TEST: Bottom Hole
TESTER: B. Bjornson
EMPL. NO: 140
WITNESS: R. Carstairs
DRILLING CONTRACTOR: Bawden #31

EQUIPMENT AND WELL DATA

FORMATION TESTED	GAUGE DEPTH 188 °F MEAS. °F EST. TEMPERATURE
NET PRODUCTIVE THICKNESS FT	MUD TYPE Gel
K B ELEVATION	MUD WEIGHT 8.6 MUD VISC 50
ALL DEPTHS MEASURED FROM: ☑ KB ☐ GROUND	CASING OR HOLE SIZE 8 1/2"
PACKER DEPTHS TOP 8462 BOTTOM	RATHOLE SIZE N/A
DEPTH OF TESTER VALVE 8427	DRILL PIPE OD 5" WEIGHT 19.5
CASING PERFORATED INTERVAL N/A	DRILL COLLARS ABOVE TESTER ID 2 3/4" LENGTH
TOTAL DEPTH 9411	SURFACE CHOKE 1.0"
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 5/8"

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/SP. GR. 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				TESTER OPENED		
CLOSED IN				PACKER UNSEATED		

LIQUID RECOVERY DATA

FEET RECOVERED FROM TESTER VALVE	DESCRIPTION OF LIQUID
1300	Drilling Mud
1300	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. Side wall anchor let go when hydrospring opened. Unsuccessful 7 times.

COMPANY: AMOCO CANADA PETROLEUM CO. LTD.
LEGAL DESCRIPTION: 65 31 01.00 131 48 55.00
PROVINCE OR TERRITORY: N.W.T.
FIELD OR AREA: CRANSWICK
TEST NUMBER: 1
WELL NAME AND NUMBER: AMOCO PCP A-1 CRANSWICK A-22
TESTED INTERVAL: 8462 - 9411

FORM 344B

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 effecti ve permeability, md

k^1 = 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_f = reservoir pressure, psig

P_s = wellbore flow pressure, psig

$\overline{P}$ = 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_f = 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

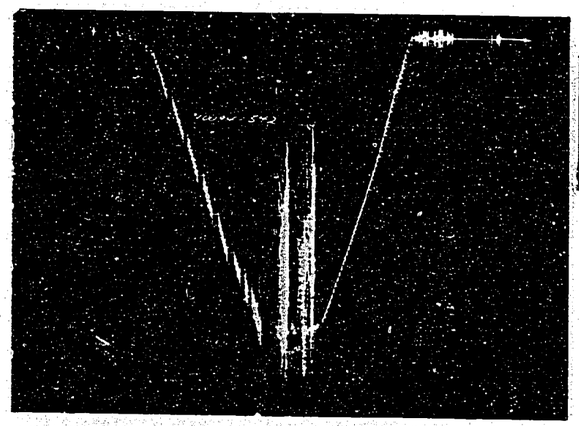
EQUIPMENT DATA

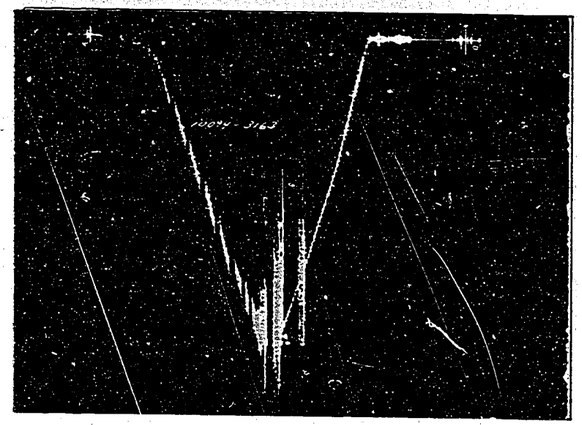
	OD	LENGTH
Reversing Sub	6 3/4"	1.0'
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters		
Handling Sub & Choke		
Dual CIP Valve	5.0"	6.5'
Dual CIP Sampler		
Hydrospring Tester	5.0"	5.0'
DEPTH		
Multiple CIP Sampler		
Extension Joint		
BT Running Case	5.0"	4.0'
DEPTH		
HT-500 Temp. Recorder	5.0"	1.5'
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		7240
Flush Joint Anchor & Equalizing Tube	5.0"	5.0'
Crossover Adapter	5.0"	1.0'
Blanked-Off BT Case	5.0"	4.0'
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	7 1/2"	5.0'
DEPTH		
Drill Collars & Adapters		
Flush Joint Anchor		
Blanked-Off BT Case		
DEPTH		

PRESSURE

TIME

Each horizontal line equal to 1000 psi





TEMPERATURE RECORD

Each concentric line equals 10° F. Temperature increases outwardly.

Ticket No. 10094

Temperature Range °F

150 °F to 250 °F

A to B — Initial CIP

B to C — 2nd Flow

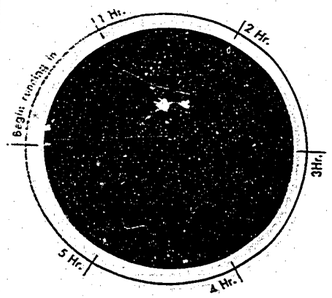
C to D — Final CIP

A _____ °F

B _____ °F

C MAX °F

D 168 °F



FORM 418

Halliburton SERVICES LIMITED

FORMATION TESTING DATA SHEET

REFER TO INVOICE NO. 10094

HALLIBURTON DISTRICT: Edmonton

JOB DATE: March 25, 1972

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	542		3163
GAUGE DEPTH	7217		7248
BLANKED OFF	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	12 hr.		12 hr.
INITIAL HYDROSTATIC	3242		3271
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	3220		3249

TYPE OF TEST	Bottom Hole
TESTER	B. Bjornson
EMPL. NO.	140
WITNESS	R. Carstairs
DRILLING CONTRACTOR	Bawden #31

EQUIPMENT AND WELL DATA

FORMATION TESTED	GAUGE DEPTH 7168 OF MEAS. OF EST.
NET PRODUCTIVE THICKNESS FT.	MUD TYPE Gel
K B ELEVATION	MUD WEIGHT 8.7 MUD VISC. 50
ALL DEPTHS MEASURED FROM: ☑ KB ☐ GROUND	CASING OR HOLE SIZE 8 1/2"
PACKER DEPTHS TOP 7240 BOTTOM	RATHOLE SIZE N/A
DEPTH OF TESTER VALVE 7206	DRILL PIPE OD 5" WEIGHT 19.5
CASING PERFORATED INTERVAL N/A	DRILL COLLARS ABOVE TESTER ID 2 3/4" LENGTH 510'
TOTAL DEPTH 7550	SURFACE CHOKE 1.0"
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 5/8"

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/SP. GR. 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				TESTER OPENED		
CLOSED IN				PACKER UNSEATED		

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
	TOTAL LIQUID RECOVERY

FEET MEASURED FROM TESTER VALVE

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. Set side wall anchor several times but skidded when hydrospring opened.

COMPANY: AMOCO CANADA PETROLEUM CO. LTD.

LEGAL DESCRIPTION: 65 31'01.00 123 48'55.00

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: CRANSWICK

WELL NAME AND NUMBER: AMOCO PCP A-1 CRANSWICK A-22

TEST NUMBER: 2

TESTED INTERVAL: 7240 - 7550

FORM 244B

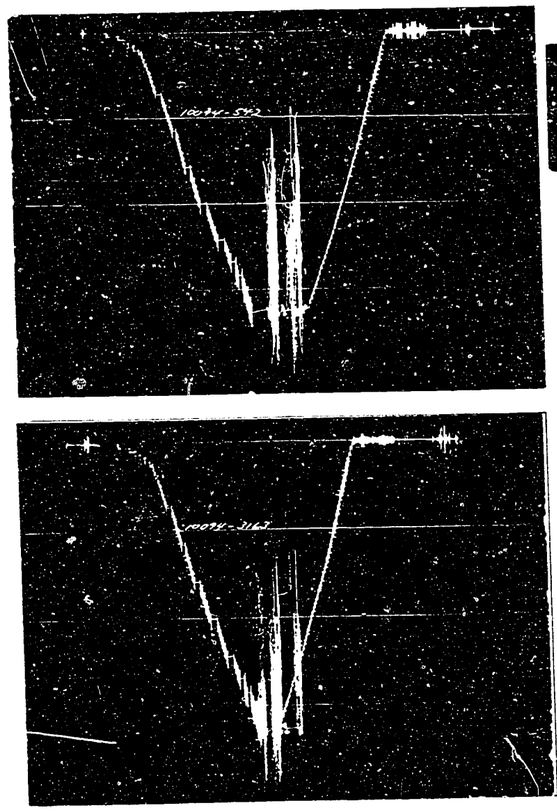
EQUIPMENT DATA

	OD	LENGTH
Packer Sub	6 3/4"	1.0'
Water Cushion Valve		
DEPTH		
Drill Collars & Adapters		
Drill Collars & Adapters		
Hydraulic Jar		
Drill Collars & Adapters	5.0"	9.5'
Drill Collars		
Hydrospring Tester	5.0"	5.0'
DEPTH		
Multiple CIP Sampler		
Extension Joint	5.0"	4.0'
BT Running Case		
DEPTH		
HT 500 Temp. Recorder	5.0"	1.5'
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		7240
Flush Joint Anchor & Equalizing Tube	5.0"	5.0'
Crossover Adapter	5.0"	1.0'
Blanked Off BT Circ.	5.0"	4.0'
DEPTH		
HT 500 Temp. Recorder		
Drill Collars & Adapters		
Flush Joint Anchor & Equalizing Tube		
Packer Assembly		
DEPTH		
Distributor		
Packer Assembly		
DEPTH		
Equalizing Tool		
Anchor Pipe		
Safety Joint		
Side Wall Anchor	7 1/2"	5.0'
DEPTH		
Drill Collars & Adapters		
Flush Joint Anchor		
Blanked Off BT Circ.		
DEPTH		

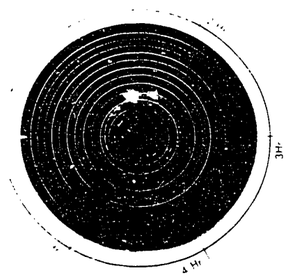
PRESSURE

TIME

Each horizontal line equal to 1000 psi



TEMPERATURE RECORD



Halliburton

FORMATION TESTING

DATA SHEET

Test Ticket No. 10014

Elmonton — March 25, 1972

Company: AMOCO CANADA PETROLEUM CO. LTD.

Well: 65 B-102-C/93 123 I-15-C/93

Well Name & No.: AMOCO PCP A-1 CRANSWICK A-22

Test No.: 2

Tested Interval: 7240 - 7550

Field or Area: CRANSWICK

Formation: M.M.T.

Petrolite — R. Bjorlson — 140

R. Carstairs — Rasden #31

PRESSURE DATA

Initial Hydrostatic	842		3163
Initial Flow	7217		7245
Initial Closed-in	12 hr.		12 hr.
Final Flow	3242		3271
Final Closed-in			
Final Hydrostatic	3220		3249

EQUIPMENT AND WELL DATA

Packer Depth(s)	7240	Hole Size	8 1/2"
Packer Depth(s)	7206	Rubber Size	N/A
Bottom Recorder Depth (Outside)	N/A	Drill Collar Length	510'
Total Depth	7550	Wt. Pipe Length	1.0"
Bottom Choke Size	Nil	Drill Pipe Length	5/8"

Hole Type: Gel — Viscosity: 50 — Weight: 8.7 — Water Loss: N/A — Weight: 19.5 — I.D.: 5"

FLUID SAMPLER DATA

Sampler Pressure at Surface: ____ PSIG

Recovery: ____ Cubic Feet of Gas

cc Water: ____

cc Mud: ____

Total Liquid cc: ____

Sampler Opened: Yes / No

Laboratory: Yes / No

Gas Gravity: ____ API

Gas/Oil Ratio: ____ Cubic Feet/Bbl

Resistivity @ Temperature Measured or Reading

Recovery Water: ____ @ ____ °F ppm

Recovery Mud Filtrate: ____ @ ____ °F ppm

Mud Pit Sample Filtrate: ____ @ ____ °F ppm

TIME PERIODS

	First	Second	Third		
Flow				Tester Valve Opened	
Closed-in				Tester Valve Closed	

LIQUID RECOVERY DATA

Feet	Description of Fluid	Gravity	Chlorides PPM

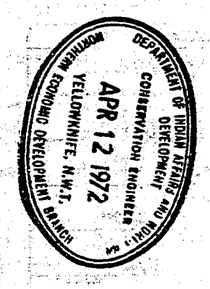
Total Fluid Recovered: ____

GAS FLOW RATE DATA

Orifice Meter / Critical Flow Prover — Pitot Tube / Vertical Critical Flow — Gas Gravity — Estimated

Choke Size	Orifice Size	Pressure PSIG	Differential	Temperature °F	Gas Rate MCF/D

REMARKS: Misrun. Set side wall anchor several times but skidded when hydrospring opened.



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^1	=	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_f	=	reservoir pressure, psig
P_s	=	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_f	=	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

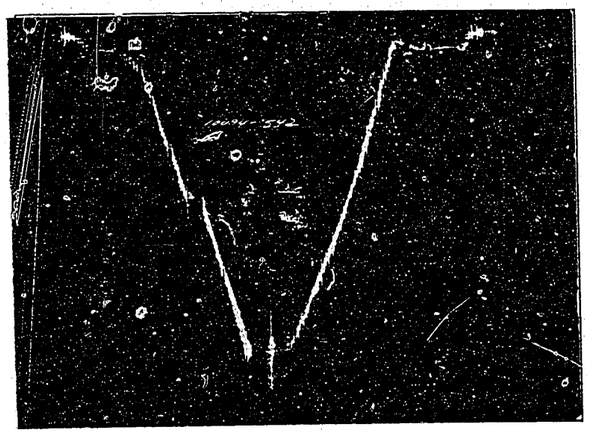
	OD	LENGTH
Reversing Sub	6 1/4"	1.0'
Water Cushion Valve		
DEPTH		
Drill Pipe & Adapters		
Drill Collars & Adapters	6 1/4"	1.0'
Handling Sub & Choke		
Dual CIP Valve	5.0"	6.5'
Dual CIP Sampler		
Hydrospring Tester	5.0"	6.5'
DEPTH		
Multiple CIP Sampler		
Extension Joint		
BT Running Case	5.0"	4.0'
DEPTH		
HT-500 Temp. Recorder		
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		7260
Flush Joint Anchor & Equalizing Tube		
Crossover Adapter		
Blanked-Off BT Case		
DEPTH		
HT-500 Temp. Recorder	5.0"	1.5'
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	6 1/4"	308.'
Flush Joint Anchor	5.0"	29.9'
Blanked-Off BT Case	5.0"	5.0'
DEPTH		7605

FORM 344A

PRESSURE

TIME

Each horizontal line equal to 1000 psi



TEMPERATURE RECORD

Each concentric line equals 10° F. Temperature increases outwardly

Ticket No. 10094

Temperature Range °F

150 °F to 250 °F

A to B — Initial CIP

B to C — 2nd Flow

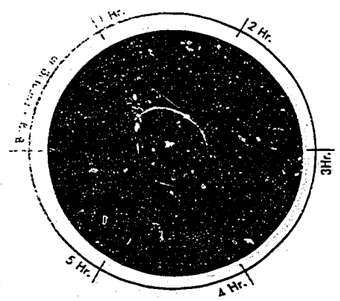
C to D — Final CIP

A _____ °F

B _____ °F

C MAX °F

D 170 °F



FORM 418

Halliburton SERVICES LIMITED

FORMATION TESTING DATA SHEET

REFER TO INVOICE NO. 10094

HALLIBURTON DISTRICT: Edmonton

JOB DATE: March 26, 1972

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	3163		542
GAUGE DEPTH	7238		7602
BANKED OFF	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	12 hr.		12 hr.
INITIAL HYDROSTATIC	3247		3414
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	3275		3422

TYPE OF TEST: Bottom Hole	TESTER: B. Bjornson	EMPL. NO.: 140
WITNESS: R. Carstairs	DRILLING CONTRACTOR: Bawden #31	

EQUIPMENT AND WELL DATA

FORMATION TESTED	GAUGE DEPTH 170 °F MEAS. °F EST.
NET PRODUCTIVE THICKNESS FT.	MUD TYPE Gel
K B ELEVATION	MUD WEIGHT 8.7 MUD VISC. 50
ALL DEPTHS MEASURED FROM ☑ KB ☐ GROUND	CASING OR HOLE SIZE 8 1/2"
PACKER DEPTHS TOP 7260 BOTTOM	RATHOLE SIZE N/A
DEPTH OF TESTER VALVE 7225	DRILL PIPE OD 5" WEIGHT 19.5
CASING PERFORATED INTERVAL N/A	DRILL COLLARS ABOVE TESTER ID 2 3/4" LENGTH 395
TOTAL DEPTH 7605	SURFACE CHOKE 1.0"
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 5/8"

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/SP. GR. 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				TESTER OPENED		
CLOSED IN				PACKER UNSEATED		

LIQUID RECOVERY DATA

FEET	DESCRIPTION OF LIQUID
	TOTAL LIQUID RECOVERY

RECOVERED FROM TESTER VALVE

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. Set packer on cement plug and plug would not support weight.

COMPANY: AMOCO CANADA PETROLEUM CO. LTD.

LEGAL DESCRIPTION: 65 31'01.00 123 48'55.00

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: CRANSWICK

WELL NAME AND NUMBER: AMOCO PCP A-1 CRANSWICK A-22

TEST NUMBER: 3

TESTED INTERVAL: 7260 - 7605

FORM 344B

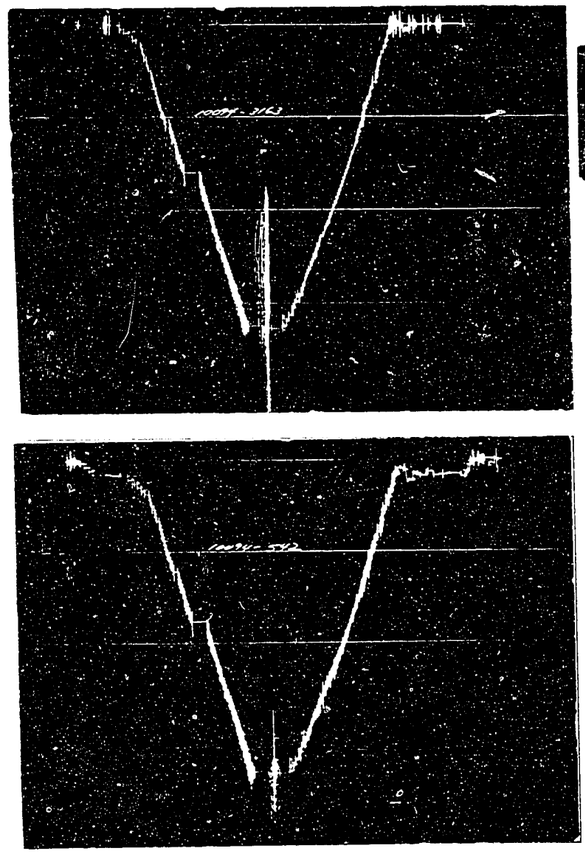
EQUIPMENT DATA

	OD	LENGTH
Recorder Sub	6 1/4"	1.0'
Reversing Sub Valve		
DEPTH		
Drill Pipe & Fittings		
Dual CIP Sampler & Adapter	6 1/4"	1.0'
Hydraulic Jar		
Dual CIP Sampler		
Hydraulic Jar	5.0"	6.5'
Dual CIP Sampler		
Hydraulic Jar	5.0"	6.5'
DEPTH		
Multiple CIP Sampler		
Reversing Sub		
BT Recorder	5.0"	4.0'
DEPTH		
HT 500 Temp. Recorder		
Hydraulic Jar	5.0"	5.0'
VR Safety Joint	5.0"	3.0'
Equalizing Crossover		
Packer Assembly	7 3/4"	6.0'
DEPTH		
Distributor		
Packer Assembly	7 3/4"	6.0'
DEPTH		7260
Flush Joint Anchor & Equalizing Tube		
Crossover Adapter		
Blanked Off BT Capt		
DEPTH		
HT 500 Temp. Recorder	5.0"	1.5'
Drill Collars & Adapters		
Flush Joint Anchor & Equalizing Tube		
Packer Assembly		
DEPTH		
Distributor		
Packer Assembly		
DEPTH		
Equalizing Seal		
Anchor Pipe Safety Joint		
Side Wall Sampler		
DEPTH		
Drill Collars & Adapters	6 1/4"	305.'
Flush Joint Anchor	5.0"	29.0'
Blanked Off BT Capt	5.0"	5.0'
DEPTH		7605

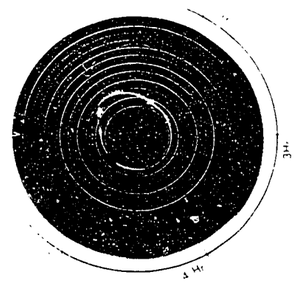
PRESSURE

TIME

Each horizontal line equal to 1000 psi



TEMPERATURE RECORD



Halliburton SERVICES LIMITED

FORMATION TESTING

Test No. 1

Test Interval 7260 - 7605

Company Limerick

Location

Date

Rig

Petroleum Engineer

Witness

Recorder No.

PRESSURE DATA

Hydrostatic Mud	3163		3142
Initial Flow	7235		7202
Initial Shut-in	12 hr.		12 hr.
Final Flow	3247		3114
Final Shut-in			
Initial Hydrostatic			
Final Hydrostatic			
Temperature			
Final Flow			
Final Shut-in			
Clock No.			
Initial Flow	3275		3422

FLUID SAMPLER DATA

SAMPLER PRESSURE AT SURFACE

RECOVERY - CC WATER

CC MUD

CC SOURCE

GRAVITY

GOR RATIO

RECOVERY GAS

RECOVERY OIL GRAVITY

RECOVERY WATER

LIQUID RECOVERY DATA

FEET

TOTAL FEET RECOVERED

EQUIPMENT AND HOLE DATA

Packer Depth 7260 Ft. Bottom Hole Temperature 150 °F

Recorder Depth 7225 Ft. Casing Size 7" 23# Set @ 7260 Ft.

Recorder Depth 7205 Ft. Drill Collar Size 3" I.D. 1 1/2" I.D.

Recorder Depth N/A Ft. Drill Pipe Size 3 1/2" I.D. 2 3/4" I.D.

Recorder Depth N/A Ft. Anchor Length 305 Ft.

Mud Weight 9.7 Vis. 50

Weight Pipe Length N/A Ft. Tool Joint Size 4 1/2" XH

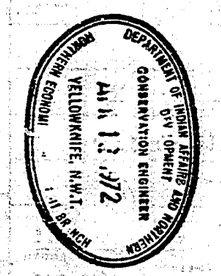
Type Test Conventional

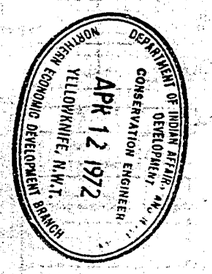
TIME PERIODS

	Initial	Final
Flow	60	60
Shut-in	60	60

GAS FLOW RATE DATA

REMARKS Misrun. Set packer on cement plug and plug would not support setbt.





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^1	=	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_i	=	reservoir pressure, psig
P_s	=	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_f	=	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

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-22	PC-PA-CRANSWICK A-22	03-28-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Lewis	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH

LEGAL LAND DESCRIPTION 65-40-131-45 NWSE

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO. 29610

SIZE 1/2 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN	8	8	8
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY	6	8	8
TIOGA	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			
NO. OF DAYS FROM SPUD	61		
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES DP			FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1'8's T'B GAGE	/ /
GPM/ PD-PSI	/ /

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	/ /
GELS.	/ /
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.TD-C
				Fuel @ 8:00 pm								
				24								

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0200	2		Cement Top Plug in 9 5/8" Csg & Weld Cap on.
0200	0800	6		Take down Prefabs & Loading Racks & Tear Out Rig
				Rig Released @ 0200 / March 28/72

DRILLER Sandaniels

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES DP			FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1'8's T'B GAGE	/ /
GPM/ PD-PSI	/ /

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	/ /
GELS.	/ /
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.TD-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	2400	8		Tear Out Rig.

DRILLER Lewis

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES DP			FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T/B GAGE	/ /
GPM. PD-PSI	/ /

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	/ /
GELS.	/ /
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.TD-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400	8		Rigging Down
				Tioga Heater Shut down @ 11:00 pm.

DRILLER D Lewis

APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT REPORT NO. 61

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P. PA-1 Cranswick	A-22	AMOCO PC PA-1 CRANSWICK A-22	02-17-75

OPERATOR: Amoco

CONTRACTOR: [illegible]

RIG NO.: 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [signature]

LEGAL LAND DESCRIPTION: 65-40-131-45 NWT

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.: — SIZE: 1 3/8 — NO. LINES: — FT. SLIPPED: — FT. CUT OFF: — PRESENT LENGTH: — TON MI. OR TRIPS SINCE LAST CUT: — CUMULATIVE TON MI. OR TRIPS:

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN	7	8	8
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT	1		
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'N'TN			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

	MORN.	DAY	EVE.
HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.	8	8	8
HRS. STANDBY			
Tioga	8	8	8
Bokers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 60

CUMULATIVE ROTATING HRS.:

TOTAL MUD COST:

MORNING TOUR

DRILLING ASSEMBLY (At end of tour): BIT — STB RMR OD — D.C. ID OD — STB RMR OD — D.C. ID OD — STB RMR OD — STANDS DP — SINGLES DP — KELLY DOWN — TOTAL — WT. OF STRING

BIT RECORD: BIT NO. — SIZE — MFG. — TYPE — JETS 1/32" — SER. NO. — DEPTH OUT — DEPTH IN — TOTAL FTG. — TOTAL HRS. RUN — COND. 1/8's T/B/GAGE — GPM/PD-PSI

MUD RECORD: TIME — WEIGHT — PRESSURE GRADIENT — VISC.-SEC. — PV/YP — GELS — WL-CC'S — pH — SOLIDS % — MUD & CHEMICALS ADDED (TYPE, AMT.)

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Run in & [illegible] #3 [illegible] @ 3880
0100	0800	7		Lay down pipe [illegible] collars – Break Kelly

Fuel 1'1"

DRILLER: [signature]

DAY TOUR

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1200	4		Laydown 5" Drillpipe Clean Floor, Laydown Kelly Swivel & Etc.
1200	1600	4		Tear Out BOPs & Laydown Same. & Drain Mud Tanks.

DRILLER: [signature]

EVENING TOUR

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400	8		Clean mud Tanks, Drain Pumps, Bail cellar & Cut off Csg. Tear out Hydril Lines

RAN 5 SX PLUG AT SURFACE

DRILLER: [signature]

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT

REPORT NO. 61

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco Ft PA-1 Ransmuck	A-22	Ft PA-1 Ransmuck NWT	03-26-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Pawidon Drlg Ser	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
J Carstairs			

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
—	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D1000	18
2	National	1320	18

LEGAL LAND DESCRIPTION 65-40-131-4 W4T

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68	26	1025		
	9 5/8	MM	43.5	95	3990		

WIRE LINE RECORD REEL NO.

SIZE 1 3/16 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	6	5	
7. LUBRICATE RIG		1/4	
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT		1	3/4
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST		13/4	
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Rig up & Lay down Line	2		6 1/2
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Tioga	8	8	8
Bowles	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 61

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T'B' GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV YP	/	/	/	
GELS.	/	/	/	
WL -CC'S.				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	RR 38
SIZE	8 1/2
MFG.	H-W
TYPE	XIC
JET 1. 32"	11 11 11
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T'B' GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV YP	/	/	/	
GELS.	/	/	/	
WL -CC'S.				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1. 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T'B' GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV/YP	/	/	/	
GELS.	/	/	/	
WL -CC'S.				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.-S PAR.-FL COM.-DC
7550												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0130	1 1/2		TRIP OUT
0130	0300	1 1/2		Run in Tbg pipe + make up DST Tools
0300	0530	2 1/2		Run in DST #3
0530	0600	1/2		R.Up Testing Head + Tay DST Lockers
0600	0800	2		TRIP OUT

DST #3 7260-7605 Dual btm. hole. No Water Cushion
Cement plug would not hold after tool opened. Skidded 20' into plug. Plug held 55M till tool opened.

DRILLER A Sawers

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL.-S PAR.-FL COM.-DC
7550				Pulled 25M to pull out of plug. Recovered 987' drlg. mud.				5 3/4		6 3/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Trip Out w/ DST #3 (WET)
0900	1045	1 3/4		Break down Packer Service & Laydown
1045	1100	1/4		R.u Serv. & BOPs + Motor Shut Off
1100	1230	1 1/2		Run in w/ B.T + 38 RR + 40 Std. DP (Change in Orders) (To laydown Pipe)
1230	1400	1 1/2		Trip Out w/ B.T + DC. R.U Halliburton (Up To Run Plug.)
1400	1500	1		Run in OPEN End.
1500	1600	1		Break Circ + Circ Gas Out.

DRILLER J Sandoval

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.-S PAR.-FL COM.-DC
7550				Plug #3 4040-3940 92 Sax Neat Class G cement. P.I.P 1630 hrs 03 26 72. Slurry 15.6 #/gal. Felt after 8 hrs @ 3880' KB.								

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1645	3/4		Mix & Pump Plug Pull 3 STDS
1645	1730	3/4		Rig to Lay down Pipe
1730	2400	6 1/2		Lay down 5" Drill Pipe, Haul over to Edge of Lease w/ forklift on Pipe Racks, Help Tear Same, Leaving 44 STDS. in Derrick To Feel Plug.

DRILLER Foreman

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 11

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco Pt. PAL. Brunswick	A-22	Amoco Pt. PAL. Brunswick A-22	03-23-92

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Barwicker Drlg Ser	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J. Carstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 I.F.	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	11 P 80	15

LEGAL LAND DESCRIPTION: 65-40-131-45 NWIT

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8	AM	68	26	1025		
	9 5/8	AM	43.5	95	3990		

WIRE LINE RECORD — REEL NO. 29610

SIZE	NO. LINES	FT. SLIPPED
1 3/4	10	

FT. CUT OFF: 1206 — PRESENT LENGTH: 6294

TON MI. OR TRIPS SINCE LAST CUT: 1919

CUMULATIVE TON MI. OR TRIPS: 7376

TIME DISTRIBUTION — HOURS

CODE NO. — OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE	1		4 1/4
6. TRIPS	2 3/4	5	2 1/2
7. LUBRICATE RIG			
8. REPAIR RIG			3/4
9. CUT OFF DRILLING LINE		1	
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. DST	1/4	2	
22. Feel Plug			1/2
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK	40	40	40
NO. OF DAYS FROM SPUD	60		
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	MUD RECORD
	BIT	FT.	BIT NO.	TIME
			SIZE	WEIGHT 8.7
	STB RMR OD	FT.	MFG.	PRESSURE GRADIENT
	D.C. ID OD	FT.	TYPE	VISC.-SEC. 50
	STB RMR OD	FT.	JETS 1 32"	PV YP
	D.C. ID OD	FT.	SER. NO.	GELS.
	STB RMR OD	FT.	DEPTH OUT	WL -CC'S.
			DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
	STANDS DP	FT.	COND. 1/8's T.B. GAGE	MUD & CHEMICALS ADDED
	SINGLES DP	FT.	GPM, PD-PSI	TYPE AMT. TYPE AMT.
	KELLY DOWN	FT.		
	TOTAL	FT.		
	WT. OF STRING	LBS.		

HORNING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.D-C
2250												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Circ Hook wall Cement Plug
0100	0400	3		Trip out to Test
0400	0515	1 1/4		Make up DST Tools
0515	0800	2 3/4		DST #2 7240-7550 Hookwall #2 No water cushion Hook wall would not hold when tool opened. Recovered 500' drlg. mud.

DRILLER: A. Spears

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO.2 LINER SIZE	PUMP NO.2 S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.D-C
7550								5 3/4		6 3/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Runin w/DST #2 (Strap In)
0830		1		Head Up Single Try To Set Hookwall
	0930			Packer Unable To Set.
0930	1200	2 1/2		Hoist DST #2 (Chain Out)
1200	1300	1		Breakdown Packer Recover Recorders Laydown Spear
1300	1400	1		Slip Cut Drlg. Cut 102' Slipped 34'
1400	1600	2		Runin w/ Bit #37 RR. & Strap Pipe.

DRILLER: Lamberson

EVENING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL-E COM.D-C
7550						14		5 1/2	55			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		Trip in Strap Pipe 2230-2400. Trip Out
1700	1830	1 1/2		Break Circ & Circ above Plug
1830	1845	1/4		Feel for Plug @ 10 000 wt went into Plug 10 ft. Pull up 5' to Circ.
1845	1930	3/4		Work on #4 Motor Clutch & Take out Compound Chain.
1930	2115	1 3/4		Circ
2115	2130	1/4		Pick up 1 Single & Go Down 15' into Plug Plug Holding 30000 Slight Cavity

DRILLER: [illegible]

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	MUD RECORD
1	BIT 8 1/2	.80 FT.	BIT NO. RR 37	TIME
1	Bit Sub	2.64	SIZE 8 1/2	WEIGHT
	STB RMR OD	FT.	MFG. Reed	PRESSURE GRADIENT
17	D.C. ID 6 1/4 OD	521.60 FT.	TYPE SHG-J	VISC.-SEC.
	STB RMR OD	FT.	JET 1/32" 11 11 11	PV/YP
	D.C. ID OD	FT.	SER. NO. 188393	GELS.
	STB RMR OD	FT.	DEPTH OUT	WL -CC'S.
1	C/O	2.32	DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
	STANDS DP	FT.	COND. 1/8's T.B. GAGE	MUD & CHEMICALS ADDED
	SINGLES DP	FT.	GPM/ PD-PSI	TYPE AMT. TYPE AMT.
	KELLY DOWN	FT.		
	TOTAL	FT.		
	WT. OF STRING	LBS.		

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	MUD RECORD
1	BIT 8 1/2	.80 FT.	BIT NO. RR 37	TIME
1	Bit Sub	2.64	SIZE 8 1/2	WEIGHT
	STB RMR OD	FT.	MFG. Reed	PRESSURE GRADIENT
17	D.C. ID 6 1/4 OD	521.60 FT.	TYPE SHG-J	VISC.-SEC.
	STB RMR OD	FT.	JETS 1.32" 11 11 11	PV/YP
	D.C. ID OD	FT.	SER. NO. 188393	GELS.
	STB RMR OD	FT.	DEPTH OUT	WL -CC'S.
1	C/O	2.32	DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
	STANDS DP 1066.32	FT.	COND. 1 8's T/B' GAGE	MUD & CHEMICALS ADDED
3	SINGLES DP	FT.	GPM/ PD-PSI	TYPE AMT. TYPE AMT.
	KELLY DOWN 19.00	FT.		
	TOTAL 1160/1168	FT.		
	WT. OF STRING 204000	LBS.		

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

KODAK SAFETY ▲ FILM ■+

DAILY DRILLING REPORT — REPORT NO. 60

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco PC PA1 Brunswick	A-22	A-1000 PC PA1 Brunswick 22	03-24-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	U.T. Hoover Drlg. Co.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J Carstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kerbow

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	A 850	18

LEGAL LAND DESCRIPTION: 03-40-13N-4E NWT

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	?	68	26	1025'		1025
	9 5/8	MM	43.5	95	3990		3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF: 1206 — PRESENT LENGTH: 6294

TON MI. OR TRIPS SINCE LAST CUT: 1542

CUMULATIVE TON MI. OR TRIPS: 7000

TIME DISTRIBUTION — HOURS

CODE NO. — OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			2 1/4
6. TRIPS	4 1/2	4 3/4	2 1/4
7. LUBRICATE RIG		1/4	
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS	1		
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST	2 1/2	3	
17. PLUG BACK			
18. ~~SQUEEZE~~ CEMENT			1 3/4
19. FISHING			
20. DIR. WORK			
21. Miss.			1 3/4
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 69

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/ YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
21	STANDS DP	8530.41	FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING	180,000	LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
100	STANDS DP	9404.96	FT.
1	SINGLES DP		FT.
	KELLY DOWN	9.00	FT.
	TOTAL	9413.00	FT.
	WT. OF STRING	216000	LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1/32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T/B/ GAGE	
GPM/ PD-PSI	

Plug no 2 7800 - 7550 118 sax neat Oilwell cement PIP 2300 hrs 03 24 72. Slurry wt 15.6 # gal

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
9413												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Logging w/ Schlumberger Tear out
0100	0230	1 1/2		Pick up - make up Testing Tools
0230	0700	4 1/2		TRIP IN DST #1 Double STRAPIN
0700	0800	1		Rig up Testing Head - Try To Set Hook wall
				DST #1 ~~8450~~ - ~~7950~~ 8462-9413 No water Packer Cushion.
				Hook wall would not seat. Rec. 1492' drlg mud.

DRILLER: A Speers

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
9413								5 3/4		6 3/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		TRY TO SET HOOKWALL PACKER DST #1
0900	1200	3		HOIST DST #1 UNABLE TO ESTABLISH SYEM. (CHAIN OUT. @ 8875
1200	1400	2		BREAK DOWN PACKER, RECOVER RECORDERS SERVICE & LAYDOWN SAME.
1400	1415	1/4		RIG SERV'D BOPs.
1415	1600	1 3/4	3/4	RUN IN OPEN END. & MEASURE 23 SINGLES.

DRILLER: L Sandquist

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
9413	T.D.						1/4	5 3/4	56	6 3/4		
Plug #01	9413-8800			350 sax neat Oilwell cement P.I. P 2100 hrs Slurry wt 15.6 # gal					03 24 72		No Feed.	

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1715	1 1/4		PICK UP 28 SINGLES
1715	1915	2		CIRC. COND. HOLE PRIOR TO RUN PLUG.
1915	2015	1		RIG HOWCO - BLOW KELLY LTC.
2015	2100	3/4		MIX & DISPLACE PLUG NO. 1
2100	2200	1		PULL 17 stds & break circulation
2200	2300	1		RIG HOWCO - MIX & DISPLACE PLUG NO. 2
2300	2345	3/4		BACKWASH 1 BBL CEMENT @ 7590'
2345	2400	1/4		CIRC. TO TEST DST #2

DRILLER: Sequichard

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 29

LEASE	WELL NO.	API WELL NUMBER	DATE
AMOCO FC PA-1 Brunswick	A-22	AMOCO FC PA-1 BRUNSWICK A-22	2-3-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN DRLG SERVICES	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Stanstairs	Jim Kerchen

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D1000	18
2	National	N 850	12

LEGAL LAND DESCRIPTION 65-40-131-4E NWIT

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M.T	61	26	1025		1025'
	9 5/8	M.T	43.5	95	3490		3990

WIRE LINE RECORD REEL NO. 29610
SIZE 3/4 NO. LINES 10 FT. SLIPPED
FT. CUT OFF 1106 PRESENT LENGTH 6274
TON MI. OR TRIPS SINCE LAST CUT 1106
CUMULATIVE TON MI. OR TRIPS 6563

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS	1	8	8
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK Start + RIG Schlumberger			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 58
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — DAY TOUR

NO.			
1	BIT 8 1/2	80	FT.
1	P.I Sub	2.64	FT.
1	STB RMR Monel OD	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
91	STANDS DP		FT.
2	SINGLES DP	85.92.19	FT.
	KELLY DOWN	17.94	FT.
	TOTAL	9413.00	FT.
WT. OF STRING	262 000		LBS.

BIT RECORD — DAY TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM. PD–PSI	

MUD RECORD — DAY TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV/YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour) — DAY TOUR

NO.			
1	BIT 8 1/2	.80	FT.
1	B.T Sub	2.64	FT.
1	STB RMR Monel OD	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	17.94	FT.
	TOTAL	9413.00	FT.
WT. OF STRING	262.000		LBS.

BIT RECORD — DAY TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM. PD–PSI	

MUD RECORD — DAY TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV/YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
CHANGING HEADS & LINERS IN H-850 INSTALLING 6 3/4"			

DAY TOUR

DRILLING ASSEMBLY (At end of tour) — EVENING TOUR

NO.			
1	BIT 8 1/2	.80	FT.
1	B.T Sub	2.64	FT.
1	STB RMR Monel OD	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
91	STANDS DP	85.92.19	FT.
2	SINGLES DP		FT.
	KELLY DOWN	17.94	FT.
	TOTAL	9413.00	FT.
WT. OF STRING	262.000		LBS.

BIT RECORD — EVENING TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM. PD–PSI	

MUD RECORD — EVENING TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV/YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE — DAY TOUR

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL–S PART–P COM'D–C
7413												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	5		WAIT on Schlumberger
0100	0700	2		WARM up Skid unit Rig To Log
0700	0800	1		Logging w/ Schlumberger

DRILLER N Speers

FOOTAGE — DAY TOUR

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL–S PART–P COM'D–C
9413								5 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1600	8		LOGGING W/ Schlumberger. And Repair Logging Unit
				DIL 3986–9402 BHT 196° F
				BHCSC 7000–9406 BHT 196° F
				No FR recorded – equipment failure.
				Log's sent to Calgary via AMO.

DRILLER L San Jamieson

FOOTAGE — EVENING TOUR

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL–S PART–P COM'D–C
9413	T.D.							5 3/4		6 3/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400	8		LOGGING W/ Schlumbergers
				CHANGED FINE TO COARSE SHAKER SCREEN #2 SHAKER
				CHANGED HEADS & LINERS IN A-850 5 3/4 TO 6 3/4
				CHANGED RAD. CORE IN #3 MOTOR 2nd Core
				FROM WATER PUMP SIDE

DRILLER Speakman

EVENING TOUR

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 58

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco PC RA I Clanswick	A22	Amoco PCRA Clanswick 11 22	03-21-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Gawlik	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Flanstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerbes

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D 1000	18
2	National	4-350	15

LEGAL LAND DESCRIPTION: 15 4N. 13W. 4S M MT

WIRE LINE RECORD — REEL NO. 29618 D

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 5/8	MM		26			1021
	7 3/4	MM	N-95	95			3990

SIZE 7 3/4 — NO. LINES 10 — FT. SLIPPED ~~34~~ 39'
FT. CUT OFF — PRESENT LENGTH 2294
TON MI. OR TRIPS SINCE LAST CUT 1106
CUMULATIVE TON MI. OR TRIPS 6563

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 3/4	5	
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2 3/4	1 1/4	5 3/4
7. LUBRICATE RIG			1/4
8. REPAIR RIG		1/4	
9. CUT OFF DRILLING LINE			1/2
10. DEVIATION SURVEY		1/4	
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
Circ Sample		1/4	
W.O. Loggers		1/4	1 1/2
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 57
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	B.T Sub	2.64	
1	STB RMR Monel	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR 6/0 OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
91	STANDS DP	8592.47	FT.
1	SINGLES DP	91.61	FT.
	KELLY DOWN	11.71	FT.
	TOTAL	1336	FT.

WT. OF STRING 262,000 LBS.

BIT RECORD

BIT NO.	36
SIZE	8 1/2
MFG.	Smith
TYPE	5 J S
JETS 1 32"	11 11 10
SER. NO.	HH720
DEPTH OUT	
DEPTH IN	9223
TOTAL FTG.	63
TOTAL HRS. RUN	5 3/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	0730	0400	0400
WEIGHT	85	85	85
PRESSURE GRADIENT	440	440	440
VISC.-SEC.	55	53	50
PV YP	/	/	15 24
GELS.	/	/	6 20
WL -CC'S.			13.0
pH			9.0
SOLIDS %			3.0

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR..L COM..D-C
9223	9386	D			50	40	1750	5 3/4	51			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2201	0216	5 1/4		Rig in (Break Circ 20 stds off Bottom)
0215	0330	5 1/4		Drlg 8 1/2 Hole
				Held Eq. Drill
				Full 5'2"

DRILLER: A Sweers

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	BT Sub	2.64	
1	STB RMR Monel	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR 6/0 OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
91	STANDS DP	8592.47	FT.
2	SINGLES DP		FT.
	KELLY DOWN	17.94	FT.
	TOTAL	9413.00	FT.

WT. OF STRING 262,000 LBS.

BIT RECORD

BIT NO.	36
SIZE	8 1/2
MFG.	Smith
TYPE	5 J S
JET 1 32"	11 11 10
SER. NO.	HH720
DEPTH OUT	
DEPTH IN	9323
TOTAL FTG.	90
TOTAL HRS. RUN	10 3/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	0800	1000	16
WEIGHT	8.7	8.6	8.6
PRESSURE GRADIENT	452	445	445
VISC.-SEC.	43	55	57
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH	6 Con. Dus		1/4 ppm
SOLIDS %	Ver. 26'		
	Wtr Cr 11.1		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	270	Tcn	
Soapash	100	LBS	
Benex	10	LBS	
WTM&T	R	Tcn	

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR..L COM..D-C
9386	9413	D			45	50	1750	5 3/4	51			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
9420								

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Sprvr BOPs Held-BOP Drill
0815	1315	5		Drlg 8 1/2" Hole
1315	1430	1 1/4		Circ Sample @ 9413
1430	1445	1/4		Pump Survey Down @ 9410
1445	1600	1 1/4		Hoist B.T 36

DRILLER: L Sandmeier

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2"	.80	FT.
1	BIT SUB	2.64	
1	STB RMR MONEL	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR 6/0 OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
91	STANDS DP	8592.47	FT.
2	SINGLES DP		FT.
	KELLY DOWN	17.94	
	TOTAL	9413.00	FT.

WT. OF STRING 262,000 LBS.

BIT RECORD

BIT NO.	36
SIZE	8 1/2
MFG.	SMITH
TYPE	5 J S
JETS 1 32"	11 11 10
SER. NO.	HH720
DEPTH OUT	
DEPTH IN	9323
TOTAL FTG.	
TOTAL HRS. RUN	10 3/4
COND. 1 8's T B GAGE	8 8 8 Lost 3 Cones
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.			
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR..L COM..D-C
9413	9413							5 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
9410	5 1/2°							

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Serv. Rig Clean Lubricator to Duals.
1615	1645	1/2		Trip Out
1645	1800	1 1/4		Orders to Trip in to 5700
1800	2200	4		Orders to Trip Out (In Sit)
2200	2230	1/2		Slip 3" Drill Line
2230	2400	1 1/2		Wait for Loggers.
				Held B.O.P. Drill & Safety Meeting

DRILLER: Tioga Camp

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 57

LEASE	WELL NO.	API WELL NUMBER	DATE
AMOCO PC DA 1 CRANSWICK	A-22	AMOCO PCP A-1 CRANSWICK A-22	03-21-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Harstairs	Jon Kerber

D.P. SIZE	WT. /FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D1000	18"
2	NSCO	H950	15"

LEGAL LAND DESCRIPTION: 65-40 131-45 NWT

WIRE LINE RECORD — REEL NO. — SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH 6294 — TON MI. OR TRIPS SINCE LAST CUT 1010 — CUMULATIVE TON MI. OR TRIPS 6407

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68	26			1026
	9 5/8	MM	43.5	95			3490

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 1/2	7 3/4	2 3/4
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			A 3 3/4
7. LUBRICATE RIG	1/4	1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	2 1/4		1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
TIOGA	8	8	8
BOILERS	8	8	8
CAMP	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 56

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	BIT SUB	2.64	
1	STB RMR NAVIDRILL 6D	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
31	STANDS DP	834.00	FT.
	SINGLES DP		FT.
1	KELLY DOWN	24.00	FT.
1	TOTAL	9170	FT.
WT. OF STRING		258,000	LBS.

BIT RECORD

BIT NO.	RR 35	
SIZE	8 1/2	
MFG.	SMITH	
TYPE	5JS	
JETS 1 32"	11 11 10	
SER. NO.	HH-724	
DEPTH OUT		
DEPTH IN	8879	
TOTAL FTG.	291	
TOTAL HRS. RUN	14 3/4	
COND. 1/8's T B GAGE		
GPM/ PD–PSI		

MUD RECORD

TIME	2540	0300	0600
WEIGHT	8.7	8.7	8.7
PRESSURE GRADIENT			
VISC.–SEC.	65	55	60
PV YP	/	/	15 22
GELS.	/	/	5 19
WL –CC'S.	/	/	11 cc. 14.0
pH	9.5		9.0
SOLIDS %	clean tanks 3.0		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bar 25 sacks			
Bent 12 Sacks			
Soda ash 100 lbs			

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	B.T Sub	2.64	
1	STB RMR Navi Drill OD	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
90	STANDS DP	8468.80	FT.
1	SINGLES DP	28.63	FT.
	KELLY DOWN		FT.
	TOTAL	9300	FT.
WT. OF STRING		260,000	LBS.

BIT RECORD

BIT NO.	RR 35	
SIZE	8 1/2	
MFG.	SMITH	
TYPE	5JS	
JETS 1 32"	11 11 10	
SER. NO.	HH-724	
DEPTH OUT	in	
DEPTH IN	8879	
TOTAL FTG.	421	
TOTAL HRS. RUN	22 1/2	
COND. 1 8's T B GAGE		
GPM/ PD–PSI		

MUD RECORD

TIME	2300	2400	1400
WEIGHT	8.4	8.6	8.6
PRESSURE GRADIENT	4.40	4.40	4.40
VISC.–SEC.	48	63	65
PV/YP.	/	/	/
GELS.	/	/	/
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	100 lbs		

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	B.T Sub	2.64	
1	STB RMR Navi Drill OD	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
90	STANDS DP	8500.02	FT.
2	SINGLES DP	20.41	FT.
	KELLY DOWN		FT.
	TOTAL	9323.00	FT.
WT. OF STRING		260,000	LBS.

BIT RECORD

BIT NO.	RR 35	36
SIZE	8 1/2	8 1/2
MFG.	SMITH	SMITH
TYPE	5JS	5JS
JETS 1 32"	11 11 10	11 11 10
SER. NO.	HH-724	HH-720
DEPTH OUT	9323	
DEPTH IN	8879	9323
TOTAL FTG.	444	
TOTAL HRS. RUN	25 1/4	
COND. 1 8's T B GAGE	8 8 1/8	
GPM/ PD–PSI		

MUD RECORD

TIME	1600	1800	1100
WEIGHT	8.7	8.6	8.6
PRESSURE GRADIENT	4.50	4.45	4.45
VISC.–SEC.	64	58	56
PV/YP.	/	/	/
GELS.	/	/	/
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Soda Ash	100 lbs		
Gel	1200 lbs		
Bent	5 sk		

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR.FL.–P COM.DC
9050	9170	D			45	50	1725	5 3/4	50			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
9061	5 7/8	X	9246	5 3/4	X			

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		TRILL 8 1/2 HOLE
0015	0030	1/4		SURVEY "MISRUN"
0030	0045	1/4		RIG SERV. & ✓ BOP
0045	0115	1/2		TRILL 8 1/2 HOLE — FUEL 53"
0115	0215	1		SURVEY @ 9051 5 7/8° — TEAM
0215	0630	4 1/4		TRILL 8 1/2 HOLE
0630	0730	1		SURVEY @ 9150 5 1/4°
0730	0800	1/2		TRILL 8 1/2 HOLE

DRILLER D Hawbo

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR.FL.–P COM.DC
9170	9300	D			45	50	1760	5 3/4	97			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0915	1 1/4		Drlg 8 1/2 Hole
0915	0930	1/4		Rig Ser. Check Tops
0930	1600	6 1/2		Drlg 8 1/2 Hole

DRILLER N Speers

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR.FL.–P COM.DC
9300	9323	D			45	50	1750	5 3/4	51			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
9320	6°	X						

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Serv & ✓ Upper & Lower Kelly Cocks
1615	1900	2 3/4		Drlg 8 1/2" Hole
1900	1915	1/4		Survey @ 9320 (Pump Down) — Due To
1915	2300	3 3/4		Hoist B.I.T #35RR 50 Stds Wet Swabey 8BBL
2300	2400	1		Make Up B.I.T #36 & Run in

DRILLER L Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
AMOCO PC PA-1 CRANSWICK	A-22	AMOCO PCPA-1 CRANSWICK A-22	03-20-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER — Jim Kerben

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D 1000	18
2	NSCO	H 950	15

LEGAL LAND DESCRIPTION — 65-40-131-45-NW.T.

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68	26			1025
9 5/8	MM	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE 13/0 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF — PRESENT LENGTH 6294

TON MI. OR TRIPS SINCE LAST CUT 670

CUMULATIVE TON MI. OR TRIPS 6097

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1.	RIG UP AND TEAR DOWN			
2.	DRILL ACTUAL		1½	7¾
3.	REAMING			
4.	CORING			
5.	CONDITION MUD & CIRCULATE	2		
6.	TRIPS	5½	6	
7.	LUBRICATE RIG	¼		¼
8.	REPAIR RIG			
9.	CUT OFF DRILLING LINE		½	
10.	DEVIATION SURVEY			
11.	WIRE LINE LOGS			
12.	RUN CASING & CEMENT			
13.	WAIT ON CEMENT			
14.	NIPPLE UP B.O.P.			
15.	TEST B.O.P.			
16.	DRILL STEM TEST			
17.	PLUG BACK			
18.	SQUEEZE CEMENT			
19.	FISHING			
20.	DIR. WORK			
21.	LOAD DST; LOG	¼		
22.				
23.				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	7¾	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.	¼		
HRS. STANDBY			
TIOGA	8	8	8
BOILERS	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 55

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD — MORNING TOUR

NO.	DRILLING ASSEMBLY		
1	BIT 8½	.80	FT.
1	BIT SUB	2.64	
1	STB RMR/MONEL OD	29.11	FT.
25	D.C. ID 6¼ OD	767.70	FT.
1	STB RMR OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
86	STANDS DP	8061.66	FT.
	SINGLES DP		FT.
	KELLY DOWN	17.00	FT.
	TOTAL	8881.13	FT.
WT. OF STRING		250,000	LBS.

BIT RECORD	
BIT NO.	RR 23
SIZE	8½
MFG.	REED
TYPE	SHGJ
JETS 1 32"	14 14 14
SER. NO.	188393
DEPTH OUT	8879
DEPTH IN	8881 C. OUT
TOTAL FTG.	—
TOTAL HRS. RUN	—
COND. 1 8's T B GAGE	—
GPM PD-PSI	

MUD RECORD			
TIME	0130	0600	0630
WEIGHT	8.8	8.7	8.8
PRESSURE GRADIENT			
VISC.-SEC.	100	95	83
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD — DAY TOUR

NO.	DRILLING ASSEMBLY		
1	BIT 8½	.80	FT.
1	BIT SUB	2.64	
1	STB RMR/MONEL OD	29.11	FT.
25	D.C. ID 6¼ OD	767.70	FT.
1	STB RMR OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
86	STANDS DP	8061.66	FT.
	SINGLES DP		FT.
	KELLY DOWN	40.77	FT.
	TOTAL	8905	FT.
WT. OF STRING		260,000	LBS.

BIT RECORD	
BIT NO.	35 RR
SIZE	8½
MFG.	Smith
TYPE	FDS
JETS 1 32"	11 11 10
SER. NO.	HH724
DEPTH OUT	
DEPTH IN	8879
TOTAL FTG.	26
TOTAL HRS. RUN	½
COND. 1 8's T B GAGE	IN
GPM PD-PSI	

MUD RECORD			
TIME			1600
WEIGHT	8.8	8.8	8.8
PRESSURE GRADIENT	450	450	450
VISC.-SEC.	75	72	76
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD — EVENING TOUR

NO.	DRILLING ASSEMBLY		
1	BIT 8½	.80	FT.
1	BIT SUB	2.64	
1	STB RMR/MONEL OD	29.11	FT.
25	D.C. ID 6¼ OD	767.70	FT.
1	STB RMR OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
87	STANDS DP	8218.84	FT.
2	SINGLES DP		FT.
	KELLY DOWN	28.62	FT.
	TOTAL	9050	FT.
WT. OF STRING		252,000	LBS.

BIT RECORD	
BIT NO.	PR 35
SIZE	8½
MFG.	Smith
TYPE	SJS
JETS 1 32"	11 11 10
SER. NO.	HH-724
DEPTH OUT	
DEPTH IN	8879
TOTAL FTG.	171
TOTAL HRS. RUN	9¼
COND. 1 8's T B GAGE	1N.
GPM PD-PSI	

MUD RECORD			
TIME	1800	2000	2200
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.-SEC.		63	57
PV/YP		/	/
GELS.		/	/
WL -CC's			
pH	10	10	10
SOLIDS %			3/4 of 1%
	7.6		11.1

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Soda Ash	300 LB.		

FOOTAGE — FORMATION (SHOW CORE RECOVERY) — DAY TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C
~~8861~~											
8879						1200	5 3/4	56			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	¼		FINISH TEARING OUT LOGGERS.
0015	0030	¼		RIG SERV. & BLIND RAMS.
0030		"5" FILL"		RUN IN FOR CLEANOUT TRIP BREAK CIR
	0430			THREE TIMES WHILE RUNNING IN.
0430	0630	2		CIR & WORK PIPE PRIOR TO TEST DST #1
0630	0800	1½		HOIST FOR DST #1 KELLY 17' IN

DRILLER D. Burko

FOOTAGE — FORMATION (SHOW CORE RECOVERY) — DAY TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C
8879	8905	D		45	50	1700	5¾	57			5

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1030	2½		HOIST F DST Change orders
1030	1130	1		RAN IN W/ BIT 5 DRILL ahead
1130	1200	½		CLEAN 34 SHOTS ONE + INSPECTED SAME
1200	1430	2½		CIR & BREAK CIRC 105'ds off Bottom
1430	1600	1½		DRLG 8½ Hole

DRILLER T. Speers

FOOTAGE — FORMATION (SHOW CORE RECOVERY) — EVENING TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C
8905	9050	D		45	50	1725	5¾	50			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	¼		Rig Serv & ✓ Kelly Cock.
1615	2400	7¾		Drlg 8½" Hole

DRILLER L. Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
AMOCO P.C. PA-1 CRANSWICK	A22		03-19-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER — Jim Kerbes

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	T1-1000	18
2	NSCO	H-850	15

LEGAL LAND DESCRIPTION — 65-40 131-45 N.W.T

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68	26			1025
9 5/8	MM	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE 13/8 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF — PRESENT LENGTH 6294

TON MI. OR TRIPS SINCE LAST CUT 256

CUMULATIVE TON MI. OR TRIPS 5555

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS	8	8	8
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.	8	8	8
HRS. STANDBY			
TIOGA	8	8	8
BOILERS	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 54

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD
	BIT .80 FT.		BIT NO. 1	TIME
	2.64		SIZE 2 1/4	WEIGHT
	STB RMR OD 29.41 FT.		MFG.	PRESSURE GRADIENT
	D.C. ID OD 767.70 FT.		TYPE	VISC.-SEC.
	STB RMR OD 2.32 FT.		JETS 1 32"	PV YP
	D.C. ID OD FT.		SER. NO.	GELS.
	STB RMR OD FT.		DEPTH OUT	WL -CC'S.
			DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
86	STANDS DP 8061.66 FT.		COND. 1 8's T.B. GAGE	
	SINGLES DP FT.		GPM. PD-PSI	
1	KELLY DOWN 17.77 FT.			
1	TOTAL 8879 FT.			
	WT. OF STRING 250 000 LBS.			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
G.L	33 00 lbs		
Soda Ash	100 lbs		
Barex	10 lbs		

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD
	BIT Bit Cut Sub .80 FT.		BIT NO.	TIME
	2.64		SIZE	WEIGHT
	STB RMR Monel 29.11 FT.		MFG.	PRESSURE GRADIENT
	D.C. ID 5 5/8 OD 7 6720 FT.		TYPE	VISC.-SEC.
	STB RMR 7 0 OD 2.32 FT.		JET 1/32"	PV YP
	D.C. ID OD FT.		SER. NO.	GELS.
	STB RMR OD FT.		DEPTH OUT	WL -CC'S.
			DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
86	STANDS DP 8061.66 FT.		COND. 1 8's T.B. GAGE	
	SINGLES DP FT.		GPM. PD-PSI	
	KELLY DOWN FT.			
	TOTAL FT.			
	WT. OF STRING LBS.			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD
1	BIT 8 1/2 .80 FT.		BIT NO. 3 5	TIME
1	Bit Sub 2.64		SIZE 8 1/2	WEIGHT
1	STB RMR 1 OD 29.11 FT.		MFG.	PRESSURE GRADIENT
25	D.C. ID 6 1/4 OD 767.70 FT.		TYPE	VISC.-SEC.
1	STB RMR 1/0 OD 2.32 FT.		JETS 1/32"	PV/YP
	D.C. ID OD FT.		SER. NO.	GELS.
	STB RMR OD FT.		DEPTH OUT	WL -CC'S.
			DEPTH IN	pH
			TOTAL FTG.	SOLIDS %
			TOTAL HRS. RUN	
86	STANDS DP 8061.66 FT.		COND. 1 8's T.B. GAGE	
	SINGLES DP FT.		GPM. PD-PSI	
	KELLY DOWN FT.			
	TOTAL FT.			
	WT. OF STRING 259 000 LBS.			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR.FL-P COM.D-C
8879				Fuel 4" T"								

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0800			Logging w/ SCHLUMBERGER LOGS RAN: Borehole Compensated Sonic Gamma Caliper Formation Density SNP DIL Dipmeter Intermediate 3990-TD 8879 4 Copies to Calgary 1 to Bartlesville DRILLER D Hawko

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR.FL-P COM.D-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1600	8		Logging w/ Schlumberger LOGS SENT VIA AMO 03-19-72 DRILLER

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL-S PAR.FL-P COM.D-C
								5 3/4		5 1/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		Logging w/ Schlumberger. Run Velocity Surveys w/ Schlumberger Tear Out Schlumberger. Held Crew Safety Meeting Checked Motor Shutoffs Okey. DRILLER L Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE: AMOCO PC PA I CRANSWICK | WELL NO. A-1 | API WELL NUMBER: AMOCO PCP A-1 CRANSWICK | DATE: 10-23-78

OPERATOR: AMOCO | CONTRACTOR: PETER BAWDEN | RIG NO. 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kerbee

LEGAL LAND DESCRIPTION: 65-40-131-45 NWT

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	ENSCO	D-1000	18
2	NSCO	A 850	15

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68	26			1025
	9 5/8	MM	43.5	95			3990

WIRE LINE RECORD — REEL NO. | SIZE 13/8 | NO. LINES 10 | FT. SLIPPED | FT. CUT OFF | PRESENT LENGTH 6294 | TON MI. OR TRIPS SINCE LAST CUT 256 | CUMULATIVE TON MI. OR TRIPS 5555

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL			
3	REAMING	1		
4	CORING			
5	CONDITION MUD & CIRCULATE	2 3/4		
6	TRIPS	2 1/4	2 1/4	
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS		5 3/4	8
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21				
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.		8	2 1/4
HRS. W/OPR. D.P.			5 3/4
HRS. WO/D.P.			8
HRS. STANDBY			
TIOCA	8	8	8
BOILER	8	8	8
LAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 53

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	.80 FT.	BIT NO.	35
1	BIT SUB	2.64	SIZE	8 1/2
1	STB RMR NOV FB	29.41 FT.	MFG.	SMITH
25	D.C. ID 6 1/4 OD	767.70 FT.	TYPE	5 J S
1	STB RMR C/O OD	2.32 FT.	JETS 1 32"	11 11 11
	D.C. ID OD	FT.	SER. NO.	HH724
	STB RMR OD	FT.	DEPTH OUT	
			DEPTH IN	8720-8847
			TOTAL FTG.	127
			TOTAL HRS. RUN	16 1/2
85	STANDS DP	FT.	COND. 1/8" T.B GAGE	RUN
2	SINGLES DP	80.30 FT.	GPM/ PD-PSI	
1	KELLY DOWN	15.60 FT.		
1	TOTAL	8847 FT.		
WT. OF STRING		250000 LBS.		

MUD RECORD			
TIME	2400	0300	
WEIGHT	8.7	8.8	
PRESSURE GRADIENT			
VISC.-SEC.	95	110	
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH	8.5	8.5	
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
LL	2 ton		
Bored	6 lbs		
Soda ash	200 lbs		

MORNING TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	.80 FT.	BIT NO.	35
1	BIT SUB	2.64	SIZE	8 1/2
1	STB RMR NOV FB	29.41 FT.	MFG.	SMITH
25	D.C. ID 6 1/4 OD	767.70 FT.	TYPE	5 J S
1	STB RMR C/O OD	2.32 FT.	JET 1 32"	11 11 11
	D.C. ID OD	FT.	SER. NO.	HH 724
	STB RMR OD	FT.	DEPTH OUT	
			DEPTH IN	8720-8847 REAM
			TOTAL FTG.	127 REAM
			TOTAL HRS. RUN	16 1/2 RH
86	STANDS DP	1066 FT.	COND. 1/8" T.B GAGE	1 1 1
	SINGLES DP	FT.	GPM/ PD-PSI	
	KELLY DOWN	17.77 FT.		
	TOTAL	8879 FT.		
WT. OF STRING		230000 LBS.		

MUD RECORD			
TIME	~~2400~~	~~0300~~	
WEIGHT	8.8	8.8	9.5
PRESSURE GRADIENT	455	440	440
VISC.-SEC.	41	41	47
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH	DEPTH		
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	3400 lbs		
Soda Ash	200 lbs		
Lignite	400 lbs		

DAY TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
	BIT	FT.	BIT NO.	
			SIZE	
	STB RMR OD	FT.	MFG.	
	D.C. ID OD	FT.	TYPE	
	STB RMR OD	FT.	JETS 1-32"	
	D.C. ID OD	FT.	SER. NO.	
	STB RMR OD	FT.	DEPTH OUT	
			DEPTH IN	
			TOTAL FTG.	
			TOTAL HRS. RUN	
	STANDS DP	FT.	COND. 1 8" T/B GAGE	
	SINGLES DP	FT.	GPM/ PD-PSI	
	KELLY DOWN	FT.		
	TOTAL	FT.		
WT. OF STRING		LBS.		

MUD RECORD			
TIME	1700	1100	2300
WEIGHT	8.8	8.6	8.5
PRESSURE GRADIENT	455	440	440
VISC.-SEC.	84	66	85
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %	Hole Took 70 BBLS mud		6 HRS.

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1	LBS	
		LBS.	

EVENING TOUR

FOOTAGE — FORMATION — DEVIATION RECORD — TIME LOG

MORNING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
8843	8847	RM			90	2	1900	5 3/4	52	5 3/4	52	S

DEVIATION RECORD: DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0800	7		REAM 8843 - 8847
0100	0145	3/4		CIR & WORK PIPE
0145	0200	1/4		SUMMIT TRIP 5 STANDS - "NO FILL"
0200	0600	2		CIR & WORK PIPE
0600	0800	2		HOIST OUT - SLM DOUBLE, FIRST 16 STDS SLOWLY

DRILLER: D Hawko

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8879 (CORRECTED)												

DEVIATION RECORD: DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1015	2 1/4		TRIP OUT TO LOG O.L.M. 8879.01
1015	1600	5 3/4		R/U TO LOG + LOGGING W/ SCHLUMBERGER
				32 FT CORRECTION MADE
				FROM 8847 to 8879
				STRAP = 8879.01
				BOARD TALLY = 8847.01

DRILLER

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8879												

DEVIATION RECORD: DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400	8		Logging w/ Schlumberger

DRILLER: L Sandquist

EVENING TOUR

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE AMOCO PC PA-1 CRANSWICK — WELL NO. A-22 — API WELL NUMBER AMOCO PCPA-1 CRANSWICK A-22 — DATE 03-17-72

OPERATOR AMOCO — CONTRACTOR PETER BAWDEN DRLG. — RIG NO. 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE — SIGNATURE OF CONTRACTOR'S TOOL PUSHER Jim Kerben

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D1000	18
2	NSCO	A850	15

LEGAL LAND DESCRIPTION 65-40 · 131-45 NWT

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68	26			1025
	9 5/8	MM	43.5	95			3990

WIRE LINE RECORD — REEL NO. — SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED 34 — FT. CUT OFF 102 — PRESENT LENGTH 6294 — TON MI. OR TRIPS SINCE LAST CUT 128 — CUMULATIVE TON MI. OR TRIPS 5427

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING		13	7 1/4
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	5 1/4		
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG	13/4		
9. CUT OFF DRILLING LINE	1		
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	3	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	6 1/4	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY REPAIR 1 3/4			
LOCA	3	8	8
BOILER	3	8	8
CAMP	3	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 52 — CUMULATIVE ROTATING HRS. — TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.90	FT.
1	BIT SUB	2.64	
1	STB RMR DC HWDP	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
85	STANDS DP		FT.
1	SINGLES DP	779.74	FT.
1	KELLY DOWN	40.00	FT.
1	TOTAL	8843	FT.
WT. OF STRING		240000	LBS.

BIT RECORD

BIT NO.	35
SIZE	8 1/2
MFG.	SMITH
TYPE	SJS
JETS 1 32"	11 11 11
SER. NO.	HH724
DEPTH OUT	
DEPTH IN	8847
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B. GAGE	
GPM. PD-PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV YP				
GELS				
WL CC'S				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8847												

DEVIATION RECORD — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001				HOIST OUT & LAY DOWN 3 STAB & BUMPER
	0215	2 1/4		SUB 3 POINT REAMER & TELEDRIFT SUB
0215	0315	1		SLIP & CUT LINE
0315	0615	3		RUN IN & LAY DOWN 1 SINGLE "WASHED"
0615	0800	1 3/4		REPAIR COMPOUND CHAIN

DRILLER D Howlett

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	B.T SUB	2.64	
1	STB RMR MONEL DC HWDP	29.11	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
85	STANDS DP		FT.
1	SINGLES DP	779.74	FT.
1	KELLY DOWN	40.69	FT.
1	TOTAL	8843.00	FT.
WT. OF STRING		250,000	LBS.

BIT RECORD

BIT NO.	35
SIZE	8 1/2
MFG.	Smith
TYPE	SJS
JET 1 32"	11 11 11
SER. NO.	HH724
DEPTH OUT	
DEPTH IN	8720 RM DEPTH
TOTAL FTG.	30
TOTAL HRS. RUN	7 3/4 REAM
COND. 1/8's T B GAGE	R 4 N
GPM. PD-PSI	

MUD RECORD

TIME	0900	1000	1400
WEIGHT	9.5+	9.6	8.6
PRESSURE GRADIENT	440	440	440
VISC.-SEC.	37	40	65
PV YP	+	+	+
GELS	+	+	7
WL CC'S	—	—	—
pH	—	—	—
SOLIDS %	—	—	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	3700 lbs		
Caustic	150 lbs		
Soda Ash	14 lbs		

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S. P. M.	METHOD RUN
8847							1600	5 3/4	54			5

DEVIATION RECORD — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv + check tops 1 3/4 motor shutoffs
0815				Ream + clean hole f/ 8720 to 8750
	1600	7 3/4		Mix mud + pump sweep

DRILLER T Lovelace

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	B. Sub	2.64	
1	STB RMR MONEL DC HWDP	29.41	FT.
25	D.C. ID 6 1/4 OD	767.70	FT.
1	STB RMR C/O OD	2.32	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
85	STANDS DP		FT.
1	SINGLES DP	779.74	FT.
1	KELLY DOWN	40.69	FT.
1	TOTAL	8843.00	FT.
WT. OF STRING		250,000	LBS.

BIT RECORD

BIT NO.	35
SIZE	8 1/2
MFG.	Smith
TYPE	SJS
JETS 1, 32"	11 11 11
SER. NO.	HH724
DEPTH OUT	
DEPTH IN	8720 RM DEPTH
TOTAL FTG.	117 RM
TOTAL HRS. RUN	15 1/2
COND. 1 8's T/B. GAGE	R 4 N
GPM/ PD-PSI	

MUD RECORD

TIME	1700	1100	1500
WEIGHT	8.5	9.5	10
PRESSURE GRADIENT	440	440	445
VISC.-SEC.	60	50	47
PV YP	/	/	
GELS	/	/	
WL CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	3700 LBS		
Caustic	750 LBS		
Soda Ash	14 LBS		

EVENING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
8847	8750	R					1600	5 3/4	54	[redacted]		S
8750	8843	RM					1550		[redacted]	5 3/4	42	S

DEVIATION RECORD — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Serv
1615	2400	7 3/4		Ream + Clean Hole 8750-8843' + Cond Mud.

DRILLER

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 52

LEASE: AMOCO PC PA-1 CRANSWICK | WELL NO.: A-22 | API WELL NUMBER: AMOCO PC, 1 CRANSWICK A-22 | DATE: 03-16-72

OPERATOR | CONTRACTOR: PETER BAWDEN | RIG NO.: 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J. Mulhern | SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Hershey

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-7000	18
2	NSCO	A-850	15

LEGAL LAND DESCRIPTION: 65-40-131-45 NW 1

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68 J55	26	1025		1025
	9 5/8	MM	43.5 N80	95			3990

WIRE LINE RECORD — REEL NO.: SIZE 1 3/8 | NO. LINES 10 | FT. SLIPPED: | FT. CUT OFF 1104 | PRESENT LENGTH 6396 | TON MI. OR TRIPS SINCE LAST CUT 1728 (1728) | CUMULATIVE TON MI. OR TRIPS 5379

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL		4	1
3	REAMING		4	
4	CORING			
5	CONDITION MUD & CIRCULATE	1/4		1
6	TRIPS			1 1/2
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	STUCK	7 3/4		16
22	P. PIPE FREE			4 1/2
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
TIGA	8	8	8
BOILER	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 51

CUMULATIVE ROTATING HRS.:

TOTAL MUD COST:

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 3/4	.80 FT.	BIT NO.	34
1	NBR	4.40	SIZE	8 1/2
1	STB RMR ELE OD	9.45 FT.	MFG.	REED
1	D.C. ID TAB OD	5.08 FT.	TYPE	SC46
1	STB RMR MONEL OD	29.11 FT.	JETS 1 32"	10 11 11
1	D.C. ID TAB OD	5.08 FT.	SER. NO.	860564
1	STB RMR 6 1/4 DC OD	30.31 FT.	DEPTH OUT	
1	STAB	4.98	DEPTH IN	8750
24	6 1/4 DC	737.39	TOTAL FTG.	
1	S.SUB	10.14	TOTAL HRS. RUN	
1	4" SUB	2.32	COND. 1-8's T-B GAGE	
85	STANDS DP	FT.	GPM, PD-PSI	
	SINGLES DP	FT.		
1	KELLY DOWN	35.91 FT.		
1	TOTAL	8750.00 FT.		
WT. OF STRING	250,000 LBS.			

MUD RECORD			
TIME	2400		
WEIGHT	8.7		
PRESSURE GRADIENT			
VISC.-SEC.	38		
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH	10		
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Benex	20 lbs		
Gel	5 ton		

MORNING TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	80 FT.	BIT NO.	34
1	NBR	4.40	SIZE	8 1/2
1	STB RMR ELE OD	9.45 FT.	MFG.	Reed
1	D.C. ID Tab OD	5.08 FT.	TYPE	SC46
1	STB RMR MONEL OD	29.11 FT.	JET 1 32"	10 11 11
1	D.C. ID Tab OD	5.08 FT.	SER. NO.	860564
1	STB RMR 6 1/4 DC OD	30.31 FT.	DEPTH OUT	
1	Stab	4.98	DEPTH IN	8750
24	6 1/4 DC	737.39	TOTAL FTG.	70
1	S.Sub	10.14	TOTAL HRS. RUN	4
1	4" Sub	2.32	COND. 1-8's T.B GAGE	RUN
82	STANDS DP	7968 FT.	GPM, PD-PSI	
	SINGLES DP	FT.		
	KELLY DOWN	11.99 FT.		
	TOTAL	8820 FT.		
WT. OF STRING	244 500 LBS.			

MUD RECORD			
TIME	0360	1200	2100
WEIGHT	9.1	9.5	9.5
PRESSURE GRADIENT	440	440	440
VISC.-SEC.	50	44	39
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	2 1/2		
CL	73001bs		

DAY TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	80 FT.	BIT NO.	34
1	NBR.	4.40	SIZE	8 1/2
1	STB RMR Tele OD	9.45 FT.	MFG.	Reed
1	D.C. ID Stab OD	5.08 FT.	TYPE	SC4G
1	STB RMR Monel OD	29.11 FT.	JETS 1-32"	10 11 11
1	D.C. ID Stab OD	5.08 FT.	SER. NO.	860564
1	STB RMR 6 1/4 DC OD	30.31 FT.	DEPTH OUT	8847
1	Stab	4.98	DEPTH IN	8750
24	6 1/4 DCs	737.39	TOTAL FTG.	97
1	S.Sub	10.14	TOTAL HRS. RUN	5
1	4" Sub	2.32	COND. 1-8's T.B. GAGE	1 1 1
85	STANDS DP	FT.	GPM, PD-PSI	
	SINGLES DP	FT.		
	KELLY DOWN	38.99 FT.		
	TOTAL	8847.00 FT.		
WT. OF STRING	250,000 / LBS.			

MUD RECORD			
TIME	1700	2130	2400
WEIGHT	9.5+	9.5+	9.5+
PRESSURE GRADIENT	445	443	
VISC.-SEC.	36	37	
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE — FORMATION — DRILLING PARAMETERS

FROM	TO	DR./RM./CORE/C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
8750				Fuel 5777		200	3000	5 3/4	30			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001				TRY TO REAM TO BTM. PUMP PRESS HYDRALICING HOLE NOT CLEANING
	0745	7 3/4		STCUK, WORK PIPE NO CIRULATION
0745	0800	1/4		FREE PIPE & GOT BACK CIRULATION
				WORK PIPE CIR.

DRILLER: D. Howard

FOOTAGE — FORMATION — DRILLING PARAMETERS

FROM	TO	DR./RM./CORE/C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
8750	8820	D			45	50	1600	5 3/4	54			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1200	4		Ream to Bottom (Cir. Prior to trip)
1200	1600	4		Drlg 8 1/2 Hole Check ESCAPE BUGGY

DRILLER: J. Rogers

FOOTAGE — FORMATION — DRILLING PARAMETERS

FROM	TO	DR./RM./CORE/C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
8820	8847	D			45	50	1600	5 3/4	54			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		Drlg 8 1/2" Hole
1700	2130	4 1/2		Work Tight Hole & Work Pipe Free
2130	2230	1		Break Circ (Bit Plugged) & Circ Pipe
2230	2400	1 1/2		Hoist To Laydown STabilizers

DRILLER: L. Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 27

LEASE: AMOCO P.C. PA-1 CRANSWICK | WELL NO.: A-22 | API WELL NUMBER: AMOCO PCP A-1 CRANSWICK A-22 | DATE: 03-15-72

OPERATOR: AMOCO | CONTRACTOR: PETER BAWDEN | RIG NO.: 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature] | SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [signature]

LEGAL LAND DESCRIPTION: 6S 40-131 45 NWT

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 5/8	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D 1000	18
2	B 850 NASCO	H 850	15

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68 J55	26	1025'		1035'
9 5/8	MM	43.5 N80 S95				3790'
					KB	

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	24

FT. CUT OFF: 1104 | PRESENT LENGTH: 6396

TON MI. OR TRIPS SINCE LAST CUT: 1603

CUMULATIVE TON MI. OR TRIPS: 5156

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7	13 3/4	
3. REAMING			5 3/4
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS		4 3/4	1 1/2
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			1/2
10. DEVIATION SURVEY		1/4	
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. STUCK	1		
22. Change Out		1	
23.			
COMPLETION: A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. W.O. D.P.			
HRS. STANDBY			
TIOGA	8	8	8
BOILERS	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 50

CUMULATIVE ROTATING HRS.:

TOTAL MUD COST:

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	1.80	FT.
1	IVBR	4.40	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR MONEL OD	29.11	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR 1/4 D OD	30.31	FT.
1	STAB	4.98	
24	6 1/4 DC	737.39	
1	15 SUB	10.14	
1	CROSS OVER SUB	2.32	
23	STANDS DP		FT.
1	SINGLES DP	781.27	FT.
1	KELLY DOWN	41.00	FT.
1	TOTAL	8692	FT.

WT. OF STRING: 242,000 LBS.

BIT RECORD

BIT NO.	33
SIZE	8 1/2
MFG.	SMITH
TYPE	SS7
JETS 1 32"	10 10 10
SER. NO.	G 1042
DEPTH OUT	
DEPTH IN	8370
TOTAL FTG.	*320
TOTAL HRS. RUN	13
COND. 1 8's T B GAGE	RUN
GPM PD-PSI	

MUD RECORD

	0700	0300	0600
TIME			
WEIGHT	8 3/4	8.5	8.4
PRESSURE GRADIENT	—	—	—
VISC.-SEC.	28	28	28
PV/YP	—	—	—
GELS	—	—	—
WL-CC'S	—	—	—
pH	20	9.0	9.0
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bunex 13 Nov.			

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	NBR	4.40	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR MONEL OD	29.11	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR 1/4 D OD	30.31	FT.
1	STAB	4.98	
24	6 1/4 DC	737.39	
1	15 SUB	10.14	
1	CROSS OVER SUB	2.32	
24	STANDS DP	7874.47	FT.
	SINGLES DP		FT.
	KELLY DOWN	35.97	FT.
	TOTAL	8750	FT.

WT. OF STRING: 242000 LBS.

BIT RECORD

BIT NO.	33	34
SIZE	8 1/2	8 1/2
MFG.	SMITH	REED
TYPE	SS7	SC4G
JET 1 32"	10 10 10	10 11 11
SER. NO.	GH042	860564
DEPTH OUT	8750	—
DEPTH IN	8370	8750
TOTAL FTG.	380	—
TOTAL HRS. RUN	14 3/4	—
COND. 1 8's T B GAGE	[illegible]	—
GPM PD-PSI		
B.F Cond-8 1/2-8-0 (1/8)		

MUD RECORD

TIME	[illegible]	0530	[illegible]
WEIGHT	8.4	8.4	8.4
PRESSURE GRADIENT	—	—	—
VISC.-SEC.	28	28	28
PV/YP	—	—	—
GELS	—	—	—
WL-CC'S	—	—	—
pH	—	—	—
SOLIDS %	—	—	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bunex	4 Lbs		

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	NBR	4.40	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR MONEL OD	29.11	FT.
1	D.C. ID STab OD	5.08	FT.
1	STB RMR 1/4 D OD	30.31	FT.
24	6 1/4 DCs	737.39	
1	STAB	4.98	
24	6 1/4 DCs	737.39	
1	B Sub	10.14	
1	CROSS OVER SUB	2.32	
24	STANDS DP	7874.47	FT.
	SINGLES DP		FT.
	KELLY DOWN	35.97	FT.
	TOTAL	8750.00	FT.

WT. OF STRING: 250,000 LBS.

BIT RECORD

BIT NO.	34
SIZE	8 1/2
MFG.	Reed
TYPE	SC4G
JETS 1/32"	10 11 11
SER. NO.	860564
DEPTH OUT	—
DEPTH IN	8750
TOTAL FTG.	—
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	[illegible]		
WEIGHT	8.4	8.4	8.4
PRESSURE GRADIENT	1.36	1.36	1.34
VISC.-SEC.	[illegible]	[illegible]	[illegible]
PV/YP			
GELS			
WL-CC'S			
pH	[illegible]	[illegible]	[illegible]
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1300 lbs		
Bunex	4 lbs		

EVENING TOUR

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8485	8567	D			45	50	2000	5 1/2	52			S
8567	8599	D			45	15	2900	5 1/2	54			S
8599	8692	D			45	50	2200	5 1/2	54			S

DEVIATION RECORD: DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0300	3		DRILL 8 1/2 HOLE "SAFETY MEETING HELD"
0300	0400	1		PULL THE VALVE BLEW & STUCK ON BTM FREE SAME
				WORK PIPE CIR HOLE CLEAN
0400	0800	4		DRILL 8 1/2 HOLE

DRILLER: D Hawks

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8612	8724	D			45	50	2100	5 3/4	53			S
8724	8750	D			50	45	2100	5 3/4	53			S

DEVIATION RECORD: DEPTH 8730 | DEV. 6° | DIRECTION X | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Drlg 8 1/2 Hole
0830	0845	1/4		Ser. Rig & Check Dwks + Drlg Lines
0845	1000	1 1/4		Drlg 8 1/2 Hole
[illegible]	[illegible]	[illegible]		[illegible]
1015	1715	4		[illegible]
1715	1815	1		[illegible]
1815	1900	3/4		[illegible]

DRILLER: J Sparks

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
8750						2100		5 3/4	53			S

DEVIATION RECORD: DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Serv
1615	1645	1/2		Slip 34' Drlg Line & Check Drlg Line
1645	1815	1 1/2		Run in w/ Bit #34
1815	2400	5 3/4		Break Circ Pick Up 6 Singles & Ream To Btm. Ream 85' Under Gauge Hole. Work Plugged Bit Free & Condition Mud

DRILLER: J Sparks

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 50

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P.C. PA 1 Cranswick	A-22	Amoco PCP A-1 Cranswick A-22	03-14-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Lawden Drlg. Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
	Jim Kerber

D.P. SIZE	WT. PT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	N.S.Co	A-850	15"

LEGAL LAND DESCRIPTION 65-40-131-45 N.W.T.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	A-M	68 J-55	26	1025		1025
	9 5/8	A-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE 13/8 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF 11074 — PRESENT LENGTH 6376

TON MI. OR TRIPS SINCE LAST CUT 10.72

CUMULATIVE TON MI. OR TRIPS 4745

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	6 1/2	3	6 1/2
3	REAMING			3/4
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS		4 1/4	1
7	LUBRICATE RIG	1/4	1/4	1/4
8	REPAIR RIG	1		
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY		1/4	
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	Misc.			1/4
22				
23				

COMPLETION: A. PERF'R'T'N; B. TBG TRIPS; C. TREATING; D. SWABBING; E. TESTING; F. ADDIT'N'L; G.

TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	7	7 3/4	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY Repair	1	1/4	
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 49

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2"	80 FT.	BIT NO.	32
1	N.B.R.	4.40	SIZE	8 1/2"
1	STB RMR Tele OD	9.45 FT.	MFG.	Sec.
1	D.C. ID Stab OD	5.08 FT.	TYPE	H 88
1	STB RMR Monel OD	29.11 FT.	JETS 1 32"	9 10 11
1	D.C. ID Stab OD	5.08 FT.	SER. NO.	307843
1	STB RMR Tab OD	3.03 FT.	DEPTH OUT	7902
1	Stab.	4.98	DEPTH IN	7902
24	6 1/4 DCs	737.39	TOTAL FTG.	423
1	B.T. Sub.	10.14	TOTAL HRS. RUN	20 3/4
1	Go Sub.	2.32	COND. 1 8's T B GAGE	RUN
19	STANDS DP	FT.	GPM PD-PSI	
2	SINGLES DP	746.26 FT.		
	KELLY DOWN	17.18 FT.		
	TOTAL	8325.00 FT.		
WT. OF STRING		230,000 LBS.		

MUD RECORD		
TIME	0700	1200
WEIGHT	9.1	9.1
PRESSURE GRADIENT		
VISC.-SEC.	37	37
PV-YP	1 / 1	1 / 1
GELS	1 / 1	1 / 1
WL-CC'S		
pH		
SOLIDS %		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE — FORMATION — DRILLING RECORD

FROM	TO	DR. D RM. R CORE. C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL. S PART. FL. P COMP. REC.
8185	8325	D			45	50	1800	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		INSTALL NEW HEAD. FLYWHEEL SIDE D-1000
0100	0115	1/4		SERV. RIG
0115	0800	6 3/4		DRILL 8 1/2" HOLE

4 FT 3 INS @ 720 AM

DRILLER Deaverhaus

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD		
1	BIT	80 FT.	BIT NO.	32	33
1		4.40	SIZE	8 1/2"	8 1/2
1	STB RMR OD	9.15 FT.	MFG.	SEC	SMITH
1	D.C. ID OD	5.08 FT.	TYPE	H 88	3S7
1	STB RMR OD	29.11 FT.	JET 1 32"	9 10 11	10 10 10
1	D.C. ID OD	5.08 FT.	SER. NO.	307843	GH042
1	STB RMR OD	30.31 FT.	DEPTH OUT	8370	—
1		4.98	DEPTH IN	7902	8370
24		737.39	TOTAL FTG.	468	—
1		10.14	TOTAL HRS. RUN	23 3/4	—
1		2.32			
80	STANDS DP	7479.77 FT.	COND. 1 8's T B GAGE	0 8 1	—
	SINGLES DP	FT.	GPM PD-PSI		
1	KELLY DOWN	31.00 FT.			
1	TOTAL	8370 FT.			
WT. OF STRING		230,000 LBS.			

MUD RECORD		
TIME	0800	1100
WEIGHT	8.4	8.5
PRESSURE GRADIENT		
VISC.-SEC.	28	28
PV-YP	/	/
GELS	/	/
WL-CC'S		
pH	9.5	9.5
SOLIDS %		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bentonite	4 LBS		

DAY TOUR

FOOTAGE — FORMATION — DRILLING RECORD

FROM	TO	DR. D RM. R CORE. C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL. S PART. FL. P COMP. REC.
8325	8370	D			45	50	1800	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
8348	7 3/4°	E						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0945	1 3/4		DRILL 8 1/2 HOLE CHECK SCOTT AIR PACKS
0945	1000	1/4		D. 1000 LOST PRIME RE PRIME SAME
1000	1115	1 1/4		DRILL 8 1/2 HOLE
1115	1130	1/4		TROPP SURVEY CHECK DRLG LINE
1130	1145	1/4		RIG SERV. & BOPS
1145	1430	2 3/4		HOIST OUT & CHECK BLIND RAMS GAUGE ALL STAB & REAMERS "OKAY"
1430	1600	1 1/2		RUNNING IN

DRILLER Don Kerber

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD		
1	BIT 8 1/2	80 FT.	BIT NO.	33	
1	NBR	4.40	SIZE	8"	
1	STB RMR Tele OD	9.45 FT.	MFG.	Smith	
1	D.C. ID Stab OD	5.08 FT.	TYPE	3S7	
1	STB RMR Monel OD	29.11 FT.	JETS 1 32"	10 10 10	
1	D.C. ID Stab OD	5.08 FT.	SER. NO.	GH042	
1	STB RMR 6 1/4 OD	30.31 FT.	DEPTH OUT		
1	Stab	4.98	DEPTH IN	8370	
24	6 1/4 DC	737.37	TOTAL FTG.	115	
1	B.T. Sub	10.14	TOTAL HRS. RUN	6	
1	Go Sub	2.32	COND. 1 8's T B GAGE	RUN	
81	STANDS DP	FT.	GPM PD-PSI		
1	SINGLES DP	762.10 FT.			
	KELLY DOWN	17.34 FT.			
	TOTAL	8485 FT.			
WT. OF STRING		232,000 LBS.			

MUD RECORD			
TIME	1700	1900	2300
WEIGHT	8.4	8.4	8.4
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV-YP	/	/	/
GELS	/	/	/
WL-CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bentonite	12 LBS		

EVENING TOUR

FOOTAGE — FORMATION — DRILLING RECORD

FROM	TO	DR. D RM. R CORE. C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL. S PART. FL. P COMP. REC.
8370		D			45	50	2000	5 3/4	52			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		Run in Pipe
1700	1745	3/4		Clean To Bottom 15'
1745	1900	1 1/4		Drlg 8 1/2 Hole
1900	1915	1/4		Rig Ser
1915	2400	4 3/4		Drlg 8 1/2 Hole

DRILLER Deavers

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 49

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P.C. P.A. 1 Cranswick	A-2	Amoco PCP A-1 Cranswick A-22	03-13-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg. Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER — Jim Kerbes.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Epsco	D-1000	18"
2	Oilwell	A-850	15"

LEGAL LAND DESCRIPTION 65-40-131-45 N.W.T

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	N-M	68 & 72	26	1025		1025
	9 5/8	N-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/0	10	

FT. CUT OFF 1104 — PRESENT LENGTH 10376

TON MI. OR TRIPS SINCE LAST CUT 110

CUMULATIVE TON MI. OR TRIPS 4543

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	1/4	13 1/4	5 3/4
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS	6 3/4		
7	LUBRICATE RIG	1/4	1/4	1/4
8	REPAIR RIG			1/4
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			3/4
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21		1/2		
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	5	8	6 3/4
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY Repair	3		1 1/4
Tigas	8	8	8
Boilers	8	8	8
	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	N.B.R.	440	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR ONEL OD	29.11	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR 1/4 DC OD	30.31	FT.
1	STAB	4.98	
24	6 1/4 DC	737.39	
1	6 5/8 SUB	10.14	
1	6 5/8 SUB	2.32	
76	STANDS DP	7030.66	FT.
	SINGLES DP		FT.
	KELLY DOWN	36.28	FT.
	TOTAL	7906.01	FT.
WT. OF STRING		227000	LBS.

BIT RECORD

BIT NO.	32
SIZE	8 1/2
MFG.	HBB
TYPE	SEC.
JETS 1/32"	9 10 11
SER. NO.	307843
DEPTH OUT	
DEPTH IN	7902
TOTAL FTG.	4
TOTAL HRS. RUN	1/2
COND. 1/8's T B. GAGE	R U N
GPM/ PD-PSI	

MUD RECORD

TIME	0100	0315	0700
WEIGHT	9.4	9.4	9.4
PRESSURE GRADIENT			
VISC.-SEC.	44	44	44
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.	/	/	/
pH	9.5	9.5	9.5
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Perma Lube	4	LCM	

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	NBR	440	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR ONEL OD	29.11	FT.
1	D.C. ID TAB OD	5.08	FT.
1	STB RMR 1/4 DC OD	30.31	FT.
1	STAB	4.98	
24	6 1/4 DC	737.39	
1	6 5/8 SUB	10.14	
1	6 5/8 SUB	2.32	
76	STANDS DP	7030.66	FT.
2	SINGLES DP	165.91	FT.
1	KELLY DOWN	4.00	FT.
1	TOTAL	8065	FT.
WT. OF STRING		224000	LBS.

BIT RECORD

BIT NO.	32
SIZE	8 1/2
MFG.	HBB
TYPE	SEC
JET 1/32"	9 10 11
SER. NO.	307843
DEPTH OUT	
DEPTH IN	7902
TOTAL FTG.	163
TOTAL HRS. RUN	8 1/4
COND. 1/8's T/B GAGE	R U N
GPM/ PD-PSI	

MUD RECORD

TIME	0800	1100	1500
WEIGHT	9.4	9.4	9.4
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bentonite	12 Sks		

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	NBR	4.40	
1	STB RMR ELE OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.11	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 1/4 DC OD	30.31	FT.
1	Stab	4.98	
24	6 1/4 DC	737.39	
1	6 5/8 Sub	10.14	
1	6 5/8 Sub	2.32	
78	STANDS DP	7316.46	FT.
	SINGLES DP		FT.
	KELLY DOWN	34.28	FT.
	TOTAL	8185	FT.
WT. OF STRING		77	LBS.

BIT RECORD

BIT NO.	32
SIZE	8 1/2
MFG.	SEC
TYPE	H88
JETS 1/32"	9 10 11
SER. NO.	307843
DEPTH OUT	
DEPTH IN	7902
TOTAL FTG.	283
TOTAL HRS. RUN	14
COND. 1/8's T/B GAGE	R U N
GPM/ PD-PSI	

MUD RECORD

TIME	1700	1900	2200
WEIGHT	But 8.4	8.4	8.5
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bentonite	12 LBS		

MORNING TOUR

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PARTEL-P COM.D.C
7902	7906	D.			45	30	1800	5 3/4	53			S

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0300	3		TRIP F/IN BIT, DRESS UP 3 TOOL JOINTS
0300	0315	1/4		SERV. RIG CLOSE BLIND RAMS.
0315	0700	3 3/4		TRIP IN LAY DOWN 1 JT. GRADE E. PIPE
0700	0730	1/2		CLEAN 13" TO BTM.
0730	0800	1/2		DRILL 8 1/2" HOLE

DRILLER Jean Landis

DAY TOUR

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PARTEL-P COM.D.C
7906	7910	D			45	40	1800	5 3/4	53			S
7910	8065	D			45	50	1850	5 3/4	53			S

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0845	3/4		DRILL 8 1/2 HOLE
0845	0900	1/4		RIG SERV. & BOP'S.
0900	1600	7		DRILL 8 1/2 HOLE

DRILLER D Hawks

EVENING TOUR

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PARTEL-P COM.D.C
8065	8185	D			45	50	1800	5 3/4	53			S

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	8100	16 3/4	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		R.S. DCA
1615	1700	3/4		DRLG 8 1/2 HOLE
1700	1745	3/4		SURVEY @ 8100 W/ WIRE LINE
1745	2115	3 1/2		DRLG 8 1/2 HOLE
2115	2230	1/4		CHANGE LINER & RODS ON PUMP #1 SIDE HEAD-LEFT SIDE
2230	2400	1 1/2		DRLG 8 1/2 HOLE

DRILLER D.S.D

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 48

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P.C. P.A 1 Cranswick	A-22	Amoco PCP A-1 CRANSWICK A-22	03-12-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg. Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER — D. Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	Nsco	H-850	15"

LEGAL LAND DESCRIPTION 65-40-131-45 N.W.T.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	N-M	68 J55	26	1025		1025
	9 5/8	N-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF 7104 — PRESENT LENGTH 6396

TON MI. OR TRIPS SINCE LAST CUT 750

CUMULATIVE TON MI. OR TRIPS 4283

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	13 1/4	7 3/4	6 1/2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			1
7. LUBRICATE RIG	1/4	1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING		6	
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 41

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	Junk S.	197	
1	STB RMR NBR OD	440	FT.
1	D.C. ID TELE OD	945	FT.
1	STB RMR STAB OD	508	FT.
1	D.C. ID MONEL OD	2911	FT.
1	STB RMR STAB OD	508	FT.
1	6 1/4 D.C.	3031	
1/4	STAB	478	
1/4	24 D.C.	737 39	
1	12 Sub	1014	
1	6 5/8 Sub	232	
72	STANDS DP	6782 42	FT.
1	SINGLES DP		FT.
	KELLY DOWN	1153	FT.
	TOTAL	7635	FT.

WT. OF STRING 218 000 LBS.

BIT RECORD

BIT NO.	31
SIZE	8 1/2"
MFG.	Sec.
TYPE	H88
JETS 1 32"	10 10 10
SER. NO.	331969
DEPTH OUT	
DEPTH IN	7465
TOTAL FTG.	170
TOTAL HRS. RUN	9
COND. 1/8's T.B. GAGE	R U N
GPM PD–PSI	

MUD RECORD

TIME	0300	0500	0700
WEIGHT	8.4	8.4	8.4
PRESSURE GRADIENT			
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL–CC'S.	/	/	/
pH	9.2	9.2	9.5
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.–S PAR.–F COM.–C
7490	7635	D.			45	45	1800	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Drill 8 1/2" Hole
0100	0115	1/4		Serv. Rig
0115	0800	6 3/4		Drill 8 1/2" Hole

FUEL 5 I. 5 INS

DRILLER A. Jorgenkamp

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	T-Sub	1.97	
1	STB RMR IBR OD	7.40	FT.
1	D.C. ID TELE OD	9.45	FT.
1	STB RMR STAB OD	5.08	FT.
1	D.C. ID MONEL OD	29.11	FT.
1	STB RMR STAB OD	5.08	FT.
1	6 1/4 D.C.	30.31	
1/4	STAB	4.98	
1/4	24 D.C.	737.39	
1	12 SUB	16.14	
1	6 5/8 SUB	2.32	
74	STANDS DP	6937.38	FT.
	SINGLES DP		FT.
1	KELLY DOWN	15.00	FT.
1	TOTAL	7793	FT.

WT. OF STRING 218000 LBS.

BIT RECORD

BIT NO.	31
SIZE	8 1/2
MFG.	Sec
TYPE	H88
JET 1 32"	10 10 10
SER. NO.	331969
DEPTH OUT	
DEPTH IN	7465
TOTAL FTG.	328
TOTAL HRS. RUN	16 3/4
COND. 1/8's T.B. GAGE	R U N
GPM PD–PSI	

MUD RECORD

TIME	1000	1200	1400
WEIGHT	8.4	8.4	9.4
PRESSURE GRADIENT			
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL–CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Barite	12 bags		

DAY TOUR

FOOTAGE FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S. P. M.	METHOD RUN SCL.–S PAR.–F COM.–C
7635	7793	D			50	15–19	1900	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0945	1 3/4		Drill 8 1/2 Hole
0945	1000	1/4		Rig Serv. & V B.O.P.
1000	1600	6		Drill 8 1/2 Hole

DRILLER D. Hawks

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	30	
1	T-Sub	1.72	FT.
1	NBR	4.40	
1	STB RMR Tele OD	7.45	FT.
1	D.C. ID Tele OD	5.08	FT.
1	STB RMR Monel OD	29.11	FT.
1	D.C. ID Tele OD	5.08	FT.
1	STB RMR NBR OD	30.31	FT.
1/4	6 1/4 D.C.	737.39	
1	12-Sub	10.14	
1	6 5/8 Sub	2.32	
75	STANDS DP	7030.66	FT.
	SINGLES DP		FT.
	KELLY DOWN	29.81	FT.
	TOTAL	7902	FT.

WT. OF STRING 218000 LBS.

BIT RECORD

BIT NO.	31
SIZE	8 1/2
MFG.	Sec
TYPE	H88
JETS 1 32"	10 10 10
SER. NO.	331969
DEPTH OUT	7902
DEPTH IN	7465
TOTAL FTG.	437
TOTAL HRS. RUN	23 1/4
COND. 1 8's T/B GAGE	8 8 (1/8)
GPM PD–PSI	

MUD RECORD

TIME	1600	1900	2300
WEIGHT	8.4+	8.4	8.4
PRESSURE GRADIENT			
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL–CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Lignex	12 lbs		

EVENING TOUR

FOOTAGE FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVEPY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.–S PAR.–F COM.–C
7793	7902	D			50	15	1800	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
7700	7/8	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1715	1 1/4		Drlg 8 1/2 Hole — Change out 4 filters on #2 superior
1715	1730	1/4		Rig Slip
1730	2245	5 1/4		Drlg 8 1/2 Hole
2245	2300	1/4		Survey
2300	2400	1		Trip for Bit

DRILLER H. Speers

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 47

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P.C.P.A 1 Cranswick	A-1 (~~A-22~~)	Amoco PCP A-1 Cranswick A-22	03-11-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]
SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6¼	4½IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	NSCO	H-850	15"

LEGAL LAND DESCRIPTION: 65-40-131-4.5-N.W.T.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13⅜	M-M	68 J-55	26	1025		1025
	9⅝	M-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.: SIZE 1⅜; NO. LINES 10; FT. SLIPPED; FT. CUT OFF 1104; PRESENT LENGTH 6296; TON MI. OR TRIPS SINCE LAST CUT 730; CUMULATIVE TON MI. OR TRIPS 4283

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7¾	4¼	1¼
3. REAMING			¾
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS		2	2½
7. LUBRICATE RIG	¼	¼	
8. REPAIR RIG		1¼	
9. CUT OFF DRILLING LINE			½
10. DEVIATION SURVEY		¼	
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

	MORN.	DAY	EVE.
HRS. W/CONTR. D.P.	8	6¾	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY		1¼	
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 46
CUMULATIVE ROTATING HRS.:
TOTAL MUD COST:

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)	FT.
1	BIT 8½	80
1	N.B.R.	440
1	STB RMR Steel OD	9.45
1	D.C. ID Stab OD	5.08
1	STB RMR Monel OD	29.11
1	D.C. ID Stab OD	5.08
1	STB RMR 6¼ DC OD	30.31
24	6¼ DCs	737.39
1	B. Sub	10.14
1	C/O Sub	2.32
69	STANDS DP	6463.59
	SINGLES DP	
	KELLY DOWN	41.00
	TOTAL	7344.00
	WT. OF STRING	222 000 LBS.

BIT RECORD	
BIT NO.	30
SIZE	8½"
MFG.	Smith
TYPE	SS7-J
JETS 1/32"	12 13 0
SER. NO.	CH466
DEPTH OUT	
DEPTH IN	7163
TOTAL FTG.	181
TOTAL HRS. RUN	10
COND. 1/8's T/B/GAGE	R U W
GPM/PD–PSI	

MUD RECORD			
TIME	0200	0400	0600
WEIGHT	[illegible]	[illegible]	[illegible]
~~PRESSURE GRADIENT~~			
VISC.–SEC.	[illegible]	[illegible]	[illegible]
~~PV/YP~~	/	/	/
~~GELS~~	/	/	/
~~WL–CC'S~~			
pH	[illegible]	[illegible]	[illegible]
~~SOLIDS %~~			

MUD & CHEMICALS ADDED: Soda-Ash 200 LBS

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN
7193	7344	D			45	50	1750	5¾	53			S

DEVIATION RECORD: DEPTH / DEV. / DIRECTION —

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0145	1¾		Drill 8½" Hole
0145	0200	¼		Serv. Rig
0200	0800	6		Drill 8½" Hole

Fuel 2'5" @ 1:30 A.M. — DRILLER: [signature]

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)	FT.
1	BIT 8½	80
1	NBR	440
1	STB RMR Steel OD	945
1	D.C. ID Stab OD	508
1	STB RMR Monel OD	2911
1	D.C. ID Stab OD	508
1	STB RMR 6¼ OD	3031
1	Stab	498
24	6¼ DC	73739
	B Sub	10.14
	C/O Sub	2.32
70	STANDS DP	
1	SINGLES DP	6588.72
1	KELLY DOWN	37.00
1	TOTAL	7465
	WT. OF STRING	222000 LBS.

BIT RECORD	
BIT NO.	30
SIZE	8½
MFG.	Smith
TYPE	SS7-J
JET 1/32"	12 13 0
SER. NO.	CH466
DEPTH OUT	7465
DEPTH IN	7163
TOTAL FTG.	302
TOTAL HRS. RUN	14¾
COND. 1/8's T/B/GAGE	8 8 I
~~GPM/PD–PSI~~	

MUD RECORD			
TIME	~~8:??~~	~~8:??~~	1100
WEIGHT	~~0800~~	~~1100~~	8.4
~~PRESSURE GRADIENT~~			
VISC.–SEC.	~~28~~	~~28~~	28
~~PV/YP~~	/	/	/
~~GELS~~	/	/	/
~~WL–CC'S~~			
~~pH~~			
SOLIDS %			

MUD & CHEMICALS ADDED: Benex 6 lbs

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN
7344	7465	D			45	50	1850	5¾	53		8	S

DEVIATION RECORD: DEPTH 7438 Misrun X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0915	1¼		Drill 8½" Hole
0915	0930	¼		Rig Service Check Escape Buggy & Boos
0930	1045	1¼		~~Drill~~ Replace Head in #1 Pump (Left Side)
1045	1345	3		Drill
1345	1400	¼		Drop Survey
1400	1600	2		Hoist & Lay Down 7 Singles.
				install head rubbers lubricator side D-1000
				Head & Rod.

DRILLER: Don [illegible]

EVENING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)	FT.
1	8½	80
1	Junk Sub	197
1	NBR	440
1	STB RMR Steel OD	945
1	D.C. ID Stab OD	508
1	STB RMR Monel OD	2911
1	D.C. ID Stab OD	508
1	STB RMR 6¼ OD	3031
1	Stab	498
24	6¼ DC	73739
1	B Sub	1014
1	C/O Sub	232
70	STANDS DP	
2	SINGLES DP	6624.48
	KELLY DOWN	23.99
	TOTAL	7490
	WT. OF STRING	214000 LBS.

BIT RECORD	
BIT NO.	31
SIZE	8½
MFG.	Sec
TYPE	H-88
JETS 1/32"	10 10 10
SER. NO.	331969
~~DEPTH OUT~~	
DEPTH IN	7465
TOTAL FTG.	25
TOTAL HRS. RUN	1¼
COND. 1/8's T/B/GAGE	R U W
GPM/PD–PSI	

MUD RECORD			
~~TIME~~			
~~WEIGHT~~			
PRESSURE ~~GRADIENT~~			
~~VISC.–SEC.~~			
~~PV/YP~~	/	/	/
~~GELS~~	/	/	/
~~WL–CC'S~~			
~~pH~~			
SOLIDS %			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN
7465	7490	D			45	40	1800	5¾	53			S

DEVIATION RECORD: DEPTH / DEV. / DIRECTION —

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1730	1½		Hoist B.T #30
1730	1900	1½		Make up B.T - Junk Sub - Run in DC.s
1900	1930	½		Slip 34' Drlg Line
1930	2200	2½		Run in pipe & pickup 7 Singles
2200	2245	¾		Clean to Bottom + work Junk Sub
2245	2400	1¼		Drlg 8½ Hole

DRILLER: M. Speers

Form 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 46

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco P.C.P.A. - 1 Cranswick	A-22		03-10-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg. Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER — Jim Hewko

LEGAL LAND DESCRIPTION — 65-40-131-45-N.W.T.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 I.F.	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	Nsco	A-850	15"

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	N-M	68 J55	26	1025		1025
9 5/8	N-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	7 3/4	4 3/4	2 3/4
3	REAMING			3/4
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS	2 1/4		3/4
7	LUBRICATE RIG	1/4	1/4	1/4
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY		1/4	
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	W.O.C.			1/2
22	W.O. B.J. Dr. Pump			1/2
23				
	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
	TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Tioga	8	8	8
Camp	8	8	8
Boilers	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 45

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD

NO.			BIT RECORD	
1	BIT 8 1/2	.80 FT.	BIT NO.	29
1	N.B.R.	7.40	SIZE	8 1/2
1	STB RMR LE OD	9.45 FT.	MFG.	Sec.
1	D.C. STAB. OD	5.08 FT.	TYPE	M.88
1	STB RMR NEL OD	29.11 FT.	JETS 1 32"	12 13 0
1	D.C. STAB. OD	5.08 FT.	SER. NO.	301850
1	STB RMR DC. OD	30.31 FT.	DEPTH OUT	
1	STAB.	4.98	DEPTH IN	6882
24	6 1/4 DCS.	737.39	TOTAL FTG.	181
1	6 1/4 SUB.	10.14	TOTAL HRS. RUN	7 3/4
1	6 1/4 SUB	2.32	COND. 1/8's T B GAGE	
66	STANDS DP	6182.69 FT.	GPM. PD-PSI	
	SINGLES DP	FT.		
	KELLY DOWN	47.00 FT.		
	TOTAL	6306.35 FT.		
	WT. OF STRING	218 000. LBS.		

MUD RECORD

TIME	0100	0700	1700
WEIGHT	8.6	9.6	9.6
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH	8.	8	9.
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Zedex	8	LBS.	

MORNING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
6882	7063	D			45	50	1750	5 3/4	53			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0115	1 1/4		Drill 8 1/2" Hole
0115	0130	1/4		Serv. Rig
0130	0800	6 1/2		Drill 8 1/2" Hole

Fuel 3 Ft 11 Inch @ 730

DRILLER Jim Hewko

DRILLING ASSEMBLY (At end of tour) — BIT RECORD

NO.			BIT RECORD		
1	BIT 8 1/2"	.80 FT.	BIT NO.	29	30
1	NBR	7.40	SIZE	8 1/2	8 1/2
1	STB RMR LE OD	9.45 FT.	MFG.	SEC	SMITH
1	D.C. STAB OD	5.08 FT.	TYPE	M88557J	
1	STB RMR NEL OD	29.11 FT.	JET 1 32"	12 13 0	12 13 0
1	D.C. STAB OD	5.08 FT.	SER. NO.	301850	CH466
1	STB RMR DC OD	30.31 FT.	DEPTH OUT	7163	
1	STAB	4.98	DEPTH IN	6882	7163
24	6 1/4 DC	737.39	TOTAL FTG.	281	
1	6 1/4 SUB	10.14	TOTAL HRS. RUN	9 1/2	
1	6 1/4 SUB	2.32	COND. 1/8's T/B GAGE	8 8	8
67	STANDS DP	FT.			
1	SINGLES DP	30874 FT.	GPM. PD-PSI		
1	KELLY DOWN	15.00 FT.			
1	TOTAL	7163 FT.			
	WT. OF STRING	218.000 LBS.			

MUD RECORD

TIME	0800	1100	
WEIGHT	8.4+	8.4+	
PRESSURE GRADIENT			
VISC.-SEC.	28	28	
PV/YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Benex	4 lbs.		

DAY TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
7063	7163	D			45	50	1750	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
7125	6°							

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1030	2 1/2		Drill 8 1/2 Hole
1030	1045	1/4		Rig Serv. Check Pipe Rams Hydrill
1045	1500	2 1/4		Motor Shutt Off's Kelly Cock's Crown's Stopper
1500	1515	1/4		Drill 8 1/2" Hole" Check Bit for Torque
1515	1530	2 1/4		Drop Survey
1530	1600	1/2		Hoist Out
				Change Rollers & Pins in 3 Point Reamer. & Make up Bit Jets.

DRILLER Jim Hewko

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
7163	7193	D			45	45	1700	5 3/4	53			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Ser. Check Blind Rams
1615	1630	1/4		Change air Valve on #1 Pump Control
1630	1945	3 1/4		Make up B.I. + Run in
1945	2030	3/4		Ream To Bottom
2030	2200	1 1/2		Drlg 8 1/2 Hole
2200	2315	1 1/4		Change Head Rubbers + Packing #1 pump
2315	2400	3/4		Drlg 8 1/2 Hole

DRILLER A. Spears

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

KODAK SAFETY ▲ FILM ■+

DAILY DRILLING REPORT — REPORT NO. 45

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco A.C.P.A-1 Cranswick	A-22		03-09-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco Canada Pete Co. Ltd.	Peter Bawden Drlg. Serv.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
R Rivet	Jim Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT I.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	NSCO	H-850	15

LEGAL LAND DESCRIPTION 65-40-131-45- N.W.T.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M	68 J55	26	102.5	+	1025
	9 5/8	M-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF 11 04 — PRESENT LENGTH 6396

TON MI. OR TRIPS SINCE LAST CUT 270

CUMULATIVE TON MI. OR TRIPS 3823

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			1/4
4. CORING		3 3/4	
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1/2	3 3/4	3 3/4
7. LUBRICATE RIG			
8. REPAIR RIG	1		
9. CUT OFF DRILLING LINE	1		
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. MIS	1 1/2		4
22. MIS		1 1/2	
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
TIOGA	8	8	8
CAMP	8	8	8
BOOKERS	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT	.85	FT.
	Core Bbl	64.50	
1	STB RMR Sub OD	.89	FT.
1	DC Jars OD	7.54	FT.
1	STB RMR Sub OD	2.65	FT.
24	DC 6 1/4 OD	737.39	FT.
1	STB Sub OD	2.32	FT.
64	STANDS DP	6027.35	FT.
1	SINGLES DP		FT.
	KELLY DOWN	18.51	FT.
	TOTAL	6862.05	FT.

WT. OF STRING 212 000 LBS.

BIT RECORD

BIT NO.	28
SIZE	8 15/16
MFG.	CHRIST.
TYPE	D
JETS 1 32"	
SER. NO.	FC6711
DEPTH OUT	
DEPTH IN	6862
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS.	
WL.-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D'S
6862	6862											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		TRIP OUT.
0100	0200	1		PICK UP CORE BBL & JARS
0200	0300	1		TRIP IN W/DCs
0300	0400	1		SLIP & CUT DRILL LINE
0400	0500	1		REPAIR BROKEN STEAM LINE
0500	0730	2 1/2		TRIP IN W/ CORE BBL
0730	0800	1/2		STEAM KELLY, THEAR CIRC. CIRC. CORE BBL & DROP BALL
				FUEL 5' 6" @ 730

DRILLER

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.85	FT.
1	Core-Bbl-3B	64.50	
1	STB RMR C/O OD	.89	FT.
1	D.C. ID Jars OD	7.54	FT.
1	STB RMR Sub OD	2.65	FT.
24	D.C. ID 6 1/4 OD	737.39	FT.
1	STB RMR C/O OD	2.32	FT.
1	B. Sub	10.14	
64	STANDS DP	6027.35	FT.
1	SINGLES DP	29.00	FT.
1	KELLY DOWN		FT.
1	TOTAL	6882.62	FT.

WT. OF STRING 212 000 LBS.

BIT RECORD

BIT NO.	28
SIZE	8 15/16
MFG.	CHRIST
TYPE	D
JET 1 32"	
SER. NO.	FC6711
DEPTH OUT	6882
DEPTH IN	6862
TOTAL FTG.	20
TOTAL HRS. RUN	3 3/4
COND. 1/8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	10.00
WEIGHT	8.6
PRESSURE GRADIENT	
VISC.-SEC.	28
PV YP	
GELS.	
WL.-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D'S
6862	6865	C			66	1800	1200	5 3/4	53	5 3/4		S
6865	6882	C			100	1800	1200	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1145	3 3/4		CUTTING CORE #4
1145	1430	2 3/4		BLOW KELLY HOSE OUT
1430	1600	1 1/2		OUTER CORE BBL TWISTED TWO DIFF PLACES.
				WORK ON SAME & HAD DOWN INNER BBL.

DRILLER D Hawko

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	NBR	4.40	
1	STB RMR C/O OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 4DC OD	30.21	FT.
1	Stab	4.98	
24	6 1/4 DC	737.39	
1	C/O Sub	10.14	
1	C/O Sub	2.2	
64	STANDS DP		FT.
1	SINGLES DP	6027.35	FT.
	KELLY DOWN	15.09	FT.
	TOTAL	6882	FT.

WT. OF STRING 214 000 LBS.

BIT RECORD

BIT NO.	29
SIZE	8 1/2
MFG.	SEC
TYPE	M 88
JETS 1 32"	12 13 B
SER. NO.	301830
DEPTH OUT	
DEPTH IN	6882
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	2400
WEIGHT	35
PRESSURE GRADIENT	4.40
VISC.-SEC.	28
PV. YP	
GELS.	
WL.-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D'S
6862	6882	R					1200					

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600				BREAK DOWN CORE BBLS FOR LAY DOWN SAME
	2000	4		RECOVER TOOL ON PIPE RACK (INNER BBL JAMMED AT BIT)
2000	2245	2 3/4		RUN IN W/ BIT
2242	2400	1 1/4		REAM 20' RAT HOLE

DRILLER T Speers

EVENING TOUR

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 44

LEASE: AMOCO PCPA-1 Consumer CRASWICK — WELL NO. A-22 — API WELL NUMBER: Amoco PCPA — DATE: 03-08-73

OPERATOR: AMOCO CANADA PETE CO. LTD — CONTRACTOR: PETER BAWDEN DRLG. SERV. — RIG NO. 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature] — SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Verlen

LEGAL LAND DESCRIPTION: 65-40-131-45 N.W.T.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 FH	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-100	18"
2	NOV	H-850	15"

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	N-M	68 J55	26	1025		1025
	9 5/8	N-M	43.5	95			3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/8	10	

FT. CUT OFF: 1002 — PRESENT LENGTH: 6498

TON MI. OR TRIPS SINCE LAST CUT: 1713

CUMULATIVE TON MI. OR TRIPS: 2223

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1.	RIG UP AND TEAR DOWN			
2.	DRILL ACTUAL	5	3 1/2	3
3.	REAMING			
4.	CORING			
5.	CONDITION MUD & CIRCULATE			
6.	TRIPS	2 3/4	4 1/2	2 3/4
7.	LUBRICATE RIG			1/4
8.	REPAIR RIG			
9.	CUT OFF DRILLING LINE			
10.	DEVIATION SURVEY	1/4		1/4
11.	WIRE LINE LOGS			
12.	RUN CASING & CEMENT			
13.	WAIT ON CEMENT			
14.	NIPPLE UP B.O.P.			
15.	TEST B.O.P.			
16.	DRILL STEM TEST			
17.	PLUG BACK			
18.	SQUEEZE CEMENT			
19.	FISHING			
20.	DIR. WORK			
21.	Rig Service			1/4
22.				
23.				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Boilers	8	8	8
Tioga	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 43

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2	80	FT.
1	N.B.R.	440	
1	STB RMR WELCO OD	945	FT.
1	D.C. STAB OD	508	FT.
1	STB RMR MONEL OD	2941	FT.
1	D.C. STAB OD	508	FT.
1	STB RMR 4DC OD	3051	FT.
1	STAB	498	
24	6 1/4 D.C.	73739	
1	6 1/4 SUB	232	
62	STANDS DP	5871.56	FT.
1	SINGLES DP		FT.
	KELLY DOWN	27.22	FT.
	TOTAL	6922.00	FT.
WT. OF STRING		228000	LBS.

BIT RECORD

BIT NO.	26
SIZE	8 1/2
MFG.	REED
TYPE	SMG-T
JETS 1/32"	10 10 10
SER. NO.	196453
DEPTH OUT	6728
DEPTH IN	6405
TOTAL FTG.	323
TOTAL HRS. RUN	19 1/4
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	0500	0500	0500
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Benex	6	LBS.	

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2	.80	FT.
1	NBR	4.40	
1	STB RMR REED OD	9.45	FT.
1	D.C. STAB OD	5.08	FT.
1	STB RMR MONEL OD	29.41	FT.
1	D.C. STAB OD	5.08	FT.
1	STB RMR 4DC OD	30.31	FT.
1	STAB	4.98	
24	6 1/4 D.C.	731.39	
1	8 SUB	.814	
1	C10 SUB	2.32	
63	STANDS DP		FT.
1	SINGLES DP	5934.54	FT.
	KELLY DOWN	22.00	FT.
	TOTAL	6796	FT.
WT. OF STRING		223,000	LBS.

BIT RECORD

BIT NO.	27
SIZE	8 1/2
MFG.	REED
TYPE	SCM
JET 1 32"	12 13 X
SER. NO.	
DEPTH OUT	
DEPTH IN	6728
TOTAL FTG.	68
TOTAL HRS. RUN	3 1/2
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	14.00		
WEIGHT	8.6		
PRESSURE GRADIENT			
VISC.-SEC.	28		
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2	.80	FT.
1	NBR	4.40	
1	STB RMR REED OD	1.45	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR 4DC OD	30.31	FT.
1	Stab	4.18	
24	6 1/4 DC	731.39	
1	8 SUB	2.32	
64	STANDS DP	3796.07	FT.
	SINGLES DP		FT.
	KELLY DOWN	22.37	FT.
	TOTAL	4862	FT.
WT. OF STRING		234000	LBS.

BIT RECORD

BIT NO.	27
SIZE	8 1/2
MFG.	REED
TYPE	SCM
JETS 1 32"	12 13 X
SER. NO.	197098
DEPTH OUT	4862
DEPTH IN	6728
TOTAL FTG.	134
TOTAL HRS. RUN	6 1/2
COND. 1 8's T B GAGE	8 1 1
GPM PD-PSI	

MUD RECORD

TIME	1600	1800	2000
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT			
VISC.-SEC.	28		28
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE FROM 6654 TO 6728 — DR.-D RM.-R CORE.-C: D — CORE NO. — FORMATION (SHOW CORE RECOVERY) — ROTARY RPM: 100 — WT. ON BIT 1000#: 48 — PUMP PRESS: 1650 — PUMP NO. LINER SIZE: 5 1/4 — PUMP NO. S.P.M.: 53 — METHOD RUN: SGL-S PAR-L COM-PLC

DEVIATION RECORD — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0500	5		Drill 8 1/2" Hole
0500	0515	1/4		Survey
0515	0800	2 3/4		Trip f/ New Bit

Fuel to 7:30 A.M. 23 1/2" — DRILLER [signature]

FOOTAGE FROM 6728 TO 6796 — DR.-D RM.-R CORE.-C: D — CORE NO. — FORMATION (SHOW CORE RECOVERY) — ROTARY RPM: 160 — WT. ON BIT 1000#: 50 — PUMP PRESS: 1800 — PUMP NO. LINER SIZE: 5 3/4 — PUMP NO. S.P.M.: 54 — METHOD RUN: SGL-S PAR-L COM-PLC: S

DEVIATION RECORD — DEPTH: 6697 — DEV.: 5 1/2° — DIRECTION: N 05 W

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1000	2		Hoist & Dress D.C. Connections.
1000	1200	2		Run in w/ Bit #27
1200	1230	1/2		Break Cir. Unplug Jet in Bit.
1230	1600	3 1/2		Drill 8 1/2" Hole

DRILLER D. Howes

EVENING TOUR

FOOTAGE FROM 6796 TO 4862 — DR.-D RM.-R CORE.-C: D — CORE NO. — FORMATION (SHOW CORE RECOVERY) — ROTARY RPM: 48 — WT. ON BIT 1000#: 48 — PUMP PRESS: 1800 — PUMP NO. LINER SIZE: 5 3/4 — PUMP NO. S.P.M.: 54 — METHOD RUN: SGL-S PAR-L COM-PLC: S

DEVIATION RECORD — DEPTH: 6860 — DEV.: 5 1/2 — DIRECTION:

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1620	1/2		Drill 8 1/2 Hole
1620	1645	1/4		Rig Ser.
1645	1715	2 1/2		Drill 8 1/2 Hole
1715	1825	1/4		Circ. Sample @ 6862
1825	1845	1/4		Survey
1845	1900	3/4		Hoist Pipe to measure out

DRILLER A. Sievers

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A22	Amoco P.C.P A-1	03-07-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO CANADA PETE CO LTD.	PETER BAWDEN DRLG	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerber.

D.P. SIZE	WT. FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 5/8	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Wsco	H850	15

LEGAL LAND DESCRIPTION: 65-40-131-45 NWT

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8	M·M	68 J55	26	1025		1025
	9 5/8	M·M	43.5	95	8990		3440

WIRE LINE RECORD — REEL NO.
SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED
FT. CUT OFF — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT
CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL		6 3/4	7 1/2
3. REAMING	1/2	1 1/4	
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2		
7. LUBRICATE RIG			
8. REPAIR RIG	2		
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			1/2
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Tubescope 8 1/2			
22. Amoc			
23.			
CONDITION: A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. W/O D.P.			
HRS. STANDBY			
Boiler	8	8	8
T.I.O.P.	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	.80 FT.	BIT NO.	26
1	N.B.R.	4.40	SIZE	8 1/2
1	STB RMR Dr. Bit OD	9.45 FT.	MFG.	REED
1	D.C. STAB OD	5.08 FT.	TYPE	SHG-J
1	STB RMR Monel OD	29.41 FT.	JETS 1 32"	10 10 10
1	D.C. STAB OD	5.08 FT.	SER. NO.	746453
1	STB RMR 6 1/4 DC OD	30.31 FT.	DEPTH OUT	
1	STAB	4.98	DEPTH IN	6405
24	6 1/4 DCs	737.39	TOTAL FTG.	
1	10 S.'s	2.32	TOTAL HRS. RUN	
57	STANDS DP	5332.97 FT.	COND. 1/8's T/B GAGE	
	SINGLES DP	FT.	GPM PD-PSI	
	KELLY DOWN	40.81 FT.		
	TOTAL	6203.00 FT.		
WT. OF STRING	217,000 LBS.			

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.			
PV YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 8 1/2	80 FT.	BIT NO.	26
1	N.B.R.	4.40	SIZE	8 1/2
1	STB RMR LED OD	9.45 FT.	MFG.	REED
1	D.C. STAB OD	5.08 FT.	TYPE	SHG-J
1	STB RMR Monel OD	29.41 FT.	JETS 1 32"	10 10 10
1	D.C. STAB OD	5.08 FT.	SER. NO.	746453
1	STB RMR 6 1/4 DC OD	30.39 FT.	DEPTH OUT	
1	STAB	4.98	DEPTH IN	6405
24	6 1/4 DC.	737.39	TOTAL FTG.	117
1	C/O Sub	2.32	TOTAL HRS. RUN	6 3/4
60	STANDS DP	5652.23 FT.	COND. 1/8's T/B GAGE	
1	SINGLES DP	FT.	GPM PD-PSI	
	KELLY DOWN	41.00 FT.		
	TOTAL	6522.45 FT.		
WT. OF STRING	224,000 LBS.			

MUD RECORD

TIME	0700	1200	1600
WEIGHT	8.5	8.6	8.6
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV/YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	14	Lime	5

DAY TOUR

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT	80 FT.	BIT NO.	26
1	NBR	4.40	SIZE	8 1/2
1	STB RMR LED OD	9.45 FT.	MFG.	REED
1	D.C. STAB OD	5.08 FT.	TYPE	SHGJ
1	STB RMR Monel OD	29.41 FT.	JETS 1 32"	10 10 10
1	D.C. STAB OD	5.08 FT.	SER. NO.	746453
1	STB RMR 6 1/4 DC OD	30.31 FT.	DEPTH OUT	
1	5 TAB	4.98	DEPTH IN	6405
24	6 1/4 DC	737.39	TOTAL FTG.	249
1	C/O	2.32	TOTAL HRS. RUN	14 1/4
62	STANDS DP	5808.92 FT.	COND. 1/8's T/B GAGE	
	SINGLES DP	FT.	GPM PD-PSI	
1	KELLY DOWN	16.00 FT.		
	TOTAL	6554 FT.		
WT. OF STRING	228,000 LBS.			

MUD RECORD

TIME	1600	1900	2200
WEIGHT	8.6	8.5 1/2	8.5
PRESSURE GRADIENT			
VISC.-SEC.	28	28	28
PV YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Benex	12 Sks		

EVENING TOUR

FOOTAGE — FORMATION — DEVIATION RECORD — TIME LOG

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO.2 LINER SIZE	PUMP NO.2 S.P.M.	METHOD RUN
6405								5 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0330	3 1/2		Tubescope 6 1/2" DCs Connections, Subs & Stabilizers & Turn Pins on N.B.R.
0330	0530	2		Install New Washpipe & Repack Swivel & Shorten Input & Compound Chains
0530	0730	2		Ream in w/ BIT #26 (Break Circ &
0730	0800	1/2		Pick Up singles & Clean To Btm

DRILLER: L. Sandquist

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO.2 LINER SIZE	PUMP NO.2 S.P.M.	METHOD RUN
6405	6522	D			100	4/8	1650	5 3/4	53	5 3/4		S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0915	1 1/4		Pick up Singles & Clean to Btm.
0915	1600	6 3/4		Drill 8 1/2" Hole

DRILLER: L. Sandquist

FOOTAGE FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO.2 LINER SIZE	PUMP NO.2 S.P.M.	METHOD RUN
6522	6654	D			100	4/8	1650	5 3/4	53		S	

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
6510	5 7/8	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2045	4 3/4		Drill 8 1/2" Hole
2045	2115	1/2		Survey @ 6510 5 7/8°
2115	2400	2 3/4		Drill 8 1/2" Hole

DRILLER: L. Sandquist

EVENING TOUR

Form 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 42

LEASE	WELL NO.	API WELL NUMBER	DATE
AMOCO P.C.P. A-1 CRANSWICK	A-12		03-06-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
AMOCO		PETER BAWDEN DRLG LTD.	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Jim Kerbes	

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6¼	4½ I.F.	1

PUMP NO.	PUMP MANUFACTURER		TYPE	STROKE LENGTH
1	EMSCO	D 1000	D 1000	18
2	NSCO	H-850	H-850	15

LEGAL LAND DESCRIPTION 65 - 40 - 131 - 45 N.W.T.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M. 68	J55	26	1025		1025
	9 5/8	M.M.	43.5	95	3890		3990

WIRE LINE RECORD REEL NO. — SIZE 3/16 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	3/4		
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE	1		
6. TRIPS	4½	5¾	
7. LUBRICATE RIG	¼		
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING	1½		
20. DIR. WORK			
21. MISC.		2¼	
22.			
23. DR. TUBOSCOPE			8
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
TIOGA	8	8	8
BOILERS	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			
NO. OF DAYS FROM SPUD			
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	NBR	4.40	
1	STB RMR T.D. OD	9.45	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR MON OD	29.41	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR 6¼ D.C.	30.31	FT.
26	STAB D.C. 6¼	4.75 / 798.73	FT.
1	O.S.	4.66	
1	B. SUB	2.65	
3	6¼ D.C.	93.68	
57	STANDS DP	5396.26	FT.
2	SINGLES DP		FT.
1	KELLY DOWN	21.00	FT.
	TOTAL		FT.

WT. OF STRING 216,000 LBS.

BIT RECORD

BIT NO.	25
SIZE	8½
MFG.	REED
TYPE	SHG
JETS 1 32"	10 10 10
SER. NO.	196513
DEPTH OUT	6405
DEPTH IN	6103
TOTAL FTG.	302
TOTAL HRS RUN	19¼
COND. 1 8's T B GAGE	8 6 1 8
GPM PD–PSI	

MUD RECORD

TIME	0030		
WEIGHT	8.5		
PRESSURE GRADIENT	442		
VISC.–SEC.	28		
PV YP	/ / /		
GELS	/ / /		
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	NBR	4.40	
1	STB RMR T.D. OD	9.45	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR MON OD	29.41	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR 6¼ D.C.	30.31	FT.
1	STAB	4.98	
26	6¼ D.C.	798.73	
1	C/O SUB	2.32	
58	STANDS DP	5490.06	FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.

WT. OF STRING 216,000 LBS.

BIT RECORD

BIT NO.	26
SIZE	8½
MFG.	REED
TYPE	SHG
JETS 1 32"	10 10 10
SER. NO.	796453
DEPTH OUT	
DEPTH IN	6405
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD–PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.–SEC.			
PV YP	/ / /		
GELS	/ / /		
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION

FROM	TO	DR. D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6393	6405	D			100	45	1650	5¾	57			

DEVIATION RECORD — DEPTH / DEV. / DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	.25		RIG SERV. & WORK ON PUMP
0015	0100	.75		DRLG 8½" HOLE
0100	0200	1.00		CIRC ON FISH
0200	0430	2.50		TRIP OUT ~~WITH FISH~~
0430	0530	1.00		MAKE UP OVERSHOT & PICK UP 3-6¼ COLLARS
0530	0645	1.25		RUN IN WITH OVERSHOT
0645	0715	.50		BREAK CIRC & WORK OVER FISH
0715	0800	.75		TRIP OUT WITH OVERSHOT & FISH

Fuel at 8:00 AM. 52"

DRILLER K. Lundquist

FOOTAGE / FORMATION

FROM	TO	DR. D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6405	6405											

DEVIATION RECORD — DEPTH / DEV. / DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1200	4.00		TRIP OUT WITH OVERSHOT & FISF (CHAIN OUT) WET
1200	1315	1.25		BREAK DOWN OVERSHOT & REMOVE FROM FISH
13.15	1415	1.00		TRIP OUT W/ DRILL COLLARS TO MONEL (2 COLLARS
1415	1515	1.00		UNPLUG MONEL, STAB, NBR & BIT WASHED
1515	1600	.75		MAKE UP NEW BIT, BREAK DOWN EACH JOINT CHECK, REDOPE & TORQUE SAME

DRILLER Ken Lapham

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR. D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6405	6405											

DEVIATION RECORD — DEPTH / DEV. / DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2000	4.00		BREAK & CLEAN, DRESS UP & REDOPE 6¼ D.C. CONNECTIONS – LAY DOWN 3 D.C.'S
2000	2400	4.00		TUBOSCOPE DRILL COLLARS

DRILLER K. Lewko

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 41

LEASE Amoco PCP A-1 Cranswick | WELL NO. A22 | API WELL NUMBER [redacted]2 | DATE 03-05-72

OPERATOR Amoco | CONTRACTOR Peter Bawden Drlg | RIG NO. 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE Flanstairs | SIGNATURE OF CONTRACTOR'S TOOL PUSHER Tom Kenny Rep.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 5/8	4½ IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Wood	H-850	15

LEGAL LAND DESCRIPTION 65-40-13 [redacted] - 45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
9 5/8	M-M	43.5	95	3990		3990
13 3/8	M-M	68 J-55	26	1025		1025

WIRE LINE RECORD — REEL NO.

SIZE 1 3/8 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION — HOURS

CODE NO. — OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	4	11½	7¼
3. REAMING	1		
4. CORING	1		
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1 3/4		
7. LUBRICATE RIG	¼	¼	½
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Rec. Core	X		
22. Conservation		½	¼
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
CAMP	8	8	8
IDICA	8	8	8
Boiler	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 40

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	NBR	4.40	
1	STB RMR Drlg OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6¼ DC OD	30.31	FT.
1	Stab	4.98	
26	6¼ DCs	798.73	
1	Sub	2.15	
56	STANDS DP	5269.63	FT.
1	SINGLES DP		FT.
	KELLY DOWN	14.98	FT.
	TOTAL	6175.00	FT.

WT. OF STRING 202,000 LBS.

BIT RECORD

BIT NO.	25
SIZE	8½
MFG.	Reed
TYPE	SH-G
JETS 1 32"	10 10 10
SER. NO.	196513
DEPTH OUT	
DEPTH IN	6103
TOTAL FTG.	72
TOTAL HRS. RUN	4
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

	0100	0300	0700
TIME			
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.-SEC.	28	28	28
PV YP	/	/	/
GELS	/	/	/
WL-CC'S	/	/	/
pH	/	/	/
SOLIDS %	2%	2	2

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bennex	24		
6 Cone Desilter	16 GPM		
Over Flow	8.5		
Under Flow	13.8		

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6103	6175	D										
6045	6103	R			120	40/50	1650	5 3/4	53			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Recover Core #3 Service BBL & Standback — Fuel @ 9:00 pm - 48
0100	0115	¼		Rig Serv. — B.O.P.s
0115	0300	1 3/4		Run in w/ Bit #25
0300	0400	1		Break Circ. & Ream 60'
0400	0800	4		Drlg 8½" Hole

DRILLER Flanstairs

DAY TOUR (continued)

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Reed OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6¼ DC OD	30.31	FT.
1	Stab.	4.98	
26	6¼ D.C.	798.73	
1	C/S Sub.	2.15	
51	STANDS DP	5364.76	FT.
1	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.

WT. OF STRING 208,000 LBS.

BIT RECORD

BIT NO.	25
SIZE	8½
MFG.	Reed
TYPE	SHG
JET 1 32"	10 10 10
SER. NO.	196513
DEPTH OUT	
DEPTH IN	6103
TOTAL FTG.	182
TOTAL HRS. RUN	11¼
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

	1330		
TIME			
WEIGHT	8.5	8.6	8.4
PRESSURE GRADIENT	447	445	441
VISC.-SEC.	28	/	/
PV YP	/	/	/
GELS	/	/	/
WL-CC'S	6	[illegible]	[illegible]
pH	[illegible]	[illegible]	[illegible]
SOLIDS %	[illegible]	[illegible]	[illegible]

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Benex	[illegible]		
[illegible]	[illegible]		

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6175	6285	D			100	50	1650	5 3/4	53			C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0915	1¼		Drill 8½" Hole
0915	0930	¼		Serv. Rig & B.O.P.'s; Kelly Cock.
0930	1530	6		Drill 8½ Hole
1530	1560	½		Kly down washed single in/string pick up Eng.

DRILLER Flanstairs

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	.80	FT.
1		4.40	
1	STB RMR OD	9.45	FT.
1	D.C. ID OD	5.08	FT.
1	STB RMR OD	29.41	FT.
1	D.C. ID OD	5.08	FT.
1	STB RMR OD	30.31	FT.
1		4.98	
26		798.73	
1	C/S Sub	2.15	
58	STANDS DP	5490.01	FT.
2	SINGLES DP	14.00	FT.
1	KELLY DOWN	6393	FT.
1	TOTAL		FT.

WT. OF STRING 218,000 LBS.

BIT RECORD

BIT NO.	25
SIZE	8½
MFG.	Reed
TYPE	SHG
JETS 1 32"	10 10 10
SER. NO.	196513
DEPTH OUT	6103
DEPTH IN	6285
TOTAL FTG.	290
TOTAL HRS. RUN	18½
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

	1600		
TIME			
WEIGHT	8.5		
PRESSURE GRADIENT			
VISC.-SEC.	28		
PV YP	/	/	/
GELS			
WL-CC'S			
pH			
SOLIDS %	2	2	2

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6285	6393	D			100	50	1650	5 3/4	53			S

Rig Inspection by J. Hamal

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1630	½		Drill 8½ Hole
1630	1645	¼		Rig Check by Conservation Board "OK"
1645	2030	3 3/4		Drill 8½ Hole
2030	2100	½		Rig Serv. & Install Two New Valves Airlines
2100	2400	3		Drill 8½ Hole

DRILLER D. Hawker

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 40

LEASE	WELL NO.	API WELL NUMBER	DATE
Amoco PCP A-1 Cranswick	A22		0304-TH

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Hartairs	Tom Cummings

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Emsco	H-850	15

LEGAL LAND DESCRIPTION: 65-40-13 W4-45

WIRE LINE RECORD — REEL NO.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68 J-55	26	1025		1025
	9 5/8	M-M	43.5	95	3990		3990

WIRE LINE RECORD: SIZE 1 5/8 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	1/4		
3. REAMING			
4. CORING		11/4	43/4
5. CONDITION MUD & CIRCULATE			
6. TRIPS	5 1/4		3
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG		1/4	
9. CUT OFF DRILLING LINE	1/4		
10. DEVIATION SURVEY	1/2		
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Pick Up Core BBL	1/2		
Circ Sample	1 1/4		
Circ Core Bbl		1/4	
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	
HRS. W/OPR. D.P.	
HRS. WO/D.P.	
HRS. STANDBY	
Boilers	8 8 8
Tioga	8 8 8
Camp	8 8 8
Shop	8 8 8
TOTAL DAY WORK	8 8 8
NO. OF DAYS FROM SPUD	39
CUMULATIVE ROTATING HRS.	
TOTAL MUD COST	

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT Core Bit	98	FT.
1	Core BBL	64.34	
1	STB RMR Bit Sub	2.65	FT.
1	D.C. ID Jars OD	7.48	FT.
1	STB RMR DP Sub	.82	FT.
26	D.C. ID 6 1/4 OD	798.73	FT.
	STB RMR OD		FT.
1	C/o Sub	2.15	
55	STANDS DP	5144.42	FT.
	SINGLES DP		FT.
	KELLY DOWN	24.43	FT.
	TOTAL	6046.00	FT.
WT. OF STRING		208,000	LBS.

BIT RECORD		
BIT NO.	23	24
SIZE	8 1/2	8 15/32
MFG.	Reed	Christo
TYPE	SHG-J	108428
JETS 1 32"	10 10 10	
SER. NO.	188393	EC57108
DEPTH OUT	6046	
DEPTH IN	6001	6046
TOTAL FTG.	45	
TOTAL HRS. RUN	2 1/2	
COND. 1-8's T/B GAGE	2 1 1	
GPM, PD-PSI		

MUD RECORD		
TIME	0100	0400
WEIGHT	8.6	8.6
PRESSURE GRADIENT	445	445
VISC.-SEC.	28	28
PV/YP	/	/
GELS	/	/
WL-CC'S	/	/
PH	/	/
SOLIDS %	/	/

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT Core Bit	98	FT.
1	Core BBL	64.34	
1	STB RMR Sub OD	2.65	FT.
1	D.C. ID Jars OD	7.48	FT.
1	STB RMR P. Sub OD	.82	FT.
26	D.C. ID 6 1/4 OD	798.73	FT.
	STB RMR OD		FT.
1	C/o Sub	2.15	
55	STANDS DP	5176.03	FT.
1	SINGLES DP		FT.
	KELLY DOWN	32.83	FT.
	TOTAL	6086.00	FT.
WT. OF STRING		204,000	LBS.

BIT RECORD			
BIT NO.	24		
SIZE	8 15/32		
MFG.	Christo		
TYPE	108428		
JET 1. 32"			
SER. NO.	EC-57108		
DEPTH OUT			
DEPTH IN	6046		
TOTAL FTG.	40		
TOTAL HRS. RUN	7 1/4		
COND. 1-8's T/B GAGE			
GPM/ PD-PSI			

MUD RECORD			
TIME	0900	1200	1600
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.-SEC.	28	28	28
PV/YP	/	/	/
GELS	/	/	/
WL-CC'S	/	/	/
PH	/	/	/
SOLIDS %	/	/	/

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT Core Bit	98	FT.
1	Core BBL	64.34	
1	STB RMR Bit Sub	2.65	FT.
1	D.C. ID Jars OD	7.48	FT.
1	STB RMR P.S. Sub	.82	FT.
26	D.C. ID 6 1/4 OD	798.73	FT.
	STB RMR OD		FT.
1	C/O	2.15	
55	STANDS DP	5207.01	FT.
2	SINGLES DP	19.00	FT.
	KELLY DOWN		FT.
	TOTAL	6103	FT.
WT. OF STRING		207,000	LBS.

BIT RECORD			
BIT NO.	24		
SIZE	8 15/32		
MFG.	Christo		
TYPE	108428		
JETS 1. 32"			
SER. NO.	EC-57108		
DEPTH OUT	6103		
DEPTH IN	6046		
TOTAL FTG.	57		
TOTAL HRS. RUN	13		
COND. 1-8's T/B GAGE	Scrubbed		
GPM/ PD-PSI			

MUD RECORD			
TIME	1600	1900	
WEIGHT	8.6	8.6	
PRESSURE GRADIENT	445	445	
VISC.-SEC.	28	28	
PV/YP	/	/	/
GELS	/	/	/
WL-CC'S	/	/	/
PH	9.0	9.0	9.0
SOLIDS %	2%	2%	2

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-F COM.D.C
6042	6046				100	50	1600	5 3/4	53			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
6010	6°	N27W	Not Corrected			(Corrected NIOE)		

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
				Fuel @ 7 AM 62"
0001	0015	1/4		Dale 8 1/2" H.C.E
0015	0130	1 1/4		Circ Sample (Geo. Requests)
0130	0200	1/2		Directional Survey
0200	0500	3		Hoist B.T #23 for Core BBL & Strap O.T
0500	0530	1/2		Pick Up Jars & Core BBL & Make Up B.T
0500	0545	1/4		Slip 34' of Dale Line
0545	0800	2 1/4		Run in w/ Core BBL. & Circ To Btm. 10'

DRILLER: Sandquist

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-F COM.D.C
6046	6082	C	3		116	18	1200	5 3/4	58			C
6082	6086	C	3		120	18	1160	5 3/4	58			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Serv. Rig & B.O.P. Install Belts on Air Comp.
0830	0845	1/4		Circ Core Bbl & Drop Ball
0845	1600	7 1/4		Cut Core #3.
				Rig up light Plant at water. Hole use To Pump water on/Trucks.

DRILLER: Sandquist

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-F COM.D.C
6086	6103	C			120	10	1150	5 3/4	58			
				Core no. 3 6046 - 6103 recovered 57' cut 47'								

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
				No stain. Dense dolomite.
1600	1745	1 3/4		Cut Core #3
1745	1800	1/4		Rig Serv. & BOPS
1800	2100	3		Cut Core #3
2100	2315	2 1/4		Hoist Core & Dress Up 6 Tool Jts
2315	2400	3/4		Recovering Core #3
				Core sent to Calgary AMU 03 05 12

DRILLER: Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	~~CDR~~ AMO ~~[illegible]~~ PRPA-22	3-3-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
[signature]		Tom Pennington	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5#	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Oilwell	A-850	15

LEGAL LAND DESCRIPTION 65-40-130-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M	68 J-55	26	1025		1025
	9 5/8	M-M	43.5# T	95	3990		3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7 3/4	5	
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			5 3/4
7. LUBRICATE RIG	1/4	1/4	
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY		1/4	
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
Circ Samples	2		
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTIN			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Boilers	8	8	8
Loga	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 38

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Reeled OD	9.45	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	
26	6 1/4 DCs	798.73	
1	C/O Sub	2.15	
53	STANDS DP	5084.72	FT.
1	SINGLES DP		FT.
	KELLY DOWN	17.87	FT.
	TOTAL	5900.00	FT.

WT. OF STRING 210,000 LBS.

BIT RECORD

BIT NO.	22
SIZE	8 1/2
MFG.	Reed
TYPE	SHG-J
JETS 1 32"	10 10 10
SER. NO.	675172
DEPTH OUT	
DEPTH IN	5442
TOTAL FTG.	458
TOTAL HRS. RUN	20 1/4
COND. 1 8's T B GAGE	IN
GPM. PD–PSI	

MUD RECORD

TIME	6 AM	1200	1700
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	441	441	441
VISC.–SEC.	37	41	41
PV YP	— / —	— / —	— / —
GELS.	— / —	— / —	— / —
WL –CC'S.	—	—	—
pH	—	—	—
SOLIDS %	—	—	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
5736	5900	D			100	50	1650	5 3/4	53			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		Rig Serv — Fuel @ 7:00 am 48"
0015	0800	7 3/4		Drlg 8 1/2" Hole

DRILLER Sundquist

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Reeled OD	9.45	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	
26	6 1/4 DCs	798.73	
1	C/O Sub	2.15	
53	STANDS DP	5084.72	FT.
1	SINGLES DP		FT.
	KELLY DOWN	17.87	FT.
	TOTAL	5900.00	FT.

WT. OF STRING 210,000 LBS.

BIT RECORD

BIT NO.	22
SIZE	8 1/2
MFG.	Reed
TYPE	SHG-J
JETS 1 32"	10 10 10
SER. NO.	675172
DEPTH OUT	6001
DEPTH IN	5442
TOTAL FTG.	559
TOTAL HRS. RUN	25 1/4
COND. 1 8's T B GAGE	6 A I
GPM. PD–PSI	

MUD RECORD

TIME	6 AM	1200	1700
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	—	—	—
VISC.–SEC.	37	41	38
PV YP	— / —	— / —	— / —
GELS.	— / —	— / —	— / —
WL –CC'S.	—	—	—
pH	—	—	—
SOLIDS %	—	—	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
5900	6001	D			100	50	1650	5 3/4	53			C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Drill 8 1/2" Hole
0900	0915	1/4		Serv. Rig & B.O.P.
0915	1000	3/4		Drill 8 1/2" Hole
1000	1100	1		Circ. Samale Request by Geologist
1100	1415	3 1/4		Drill 8 1/2" Hole
1415	1515	1		Circ Samale
1515	1530	1/4		Survey
1530	1600	1/2		Trip for Bit

FOREMAN Jorgenson

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Reeled OD	9.45	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	
26	6 1/4 DCs	798.73	
1	C/O Sub	2.15	
54	STANDS DP	5084.72	FT.
1	SINGLES DP		FT.
	KELLY DOWN	25.89	FT.
	TOTAL	6001.00	FT.

WT. OF STRING 212,000 LBS.

BIT RECORD

BIT NO.	23
SIZE	8 1/2
MFG.	Reed
TYPE	SHG-J
JETS 1 32"	10 10 10
SER. NO.	188383
DEPTH OUT	
DEPTH IN	6001
TOTAL FTG.	41
TOTAL HRS. RUN	2 1/4
COND. 1 8's T B GAGE	R J N
GPM. PD–PSI	

MUD RECORD

TIME	TRIP	—	2300
WEIGHT	TRIP	—	8.6
PRESSURE GRADIENT	TRIP	—	445
VISC.–SEC.	TRIP	—	38
PV YP	TRIP	— / —	— / —
GELS.	TRIP	— / —	— / —
WL –CC'S.	TRIP	—	—
pH	TRIP	—	—
SOLIDS %	TRIP	—	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
6001	6042	D			100	50	1600	5 3/4	53			

DEVIATION RECORD — Miss Run — Eastman

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1900	3		Hoist Out & Press 5 Tool Jts Up
1900	1930	1/2		Make Up Bit #23
1930	2130	2		Run In W/ Bit #23
2130	2145	1/4		Break Circ & Clean Three Feet To Btm.
2145	2400	2 1/4		Drill 8 1/2 Hole

DRILLER

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	42 PCPA-22	3-2-72
OPERATOR	**CONTRACTOR**		**RIG NO.**
Amoco	Peter Bawden Drlg		31
SIGNATURE OF OPERATOR'S REPRESENTATIVE	**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**		
	Tom Lemmington		

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5#	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-100	18
2	Oilwell	H-850	15

LEGAL LAND DESCRIPTION 65-40-130-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	A-M	68 J55	26			1025
	9 5/8	A-M	43.5#	95			3990

WIRE LINE RECORD — REEL NO.
SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED
FT. CUT OFF 1002 — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT 398
CUMULATIVE TON MI. OR TRIPS ~~2506~~ 2236

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5	5	7 1/2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2 1/4	2 1/4	
7. LUBRICATE RIG	1/4	1/4	1/4
8. REPAIR RIG	1/4		
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1/4		1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.		1/2	
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	7 3/4	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY	1/4		
Tioga	8	8	8
Boilers	8	8	8
Camp	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 37
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	NBR	4.40	
1	STB RMR Reed	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	
26	6 1/4 DCs	798.73	
1	C/O Sub	2.15	
18	STANDS DP	4523.47	FT.
1	SINGLES DP		FT.
	KELLY DOWN	28.14	FT.
	TOTAL	544200	FT.
WT. OF STRING	209,000	LBS.	

BIT RECORD

BIT NO.	21	22
SIZE	8 1/2	8 1/2
MFG.	Sec	Reed
TYPE	M44N	SHG-J
JETS 1 32"	9 11 11	10 10 10
SER. NO.	352833	675172
DEPTH OUT	5442	5
DEPTH IN	5016	5442
TOTAL FTG.	426	—
TOTAL HRS. RUN	22 3/4	—
COND. 1/8's T/B GAGE	8 6 1	
GPM, PD–PSI		

MUD RECORD

TIME	0100	0300	0700
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.–SEC.	27	27	28
PV/YP	/	/	/
GELS	/	/	/
WL –CC'S	6 cone bits, 2 jets 12/32		
pH	10.5	10.5	10.5
SOLIDS %	6 cone bits 2 jets 12/32		
	Sand 0.2		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Reed OD	9.45	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. STAB OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	STAB	4.98	
26	6 1/4 DCs	798.73	
1	C/O SUB	2.15	
19	STANDS DP	4617.29	FT.
1	SINGLES DP		FT.
	KELLY DOWN	27.32	FT.
	TOTAL	5535.02	FT.
WT. OF STRING	205,000	LBS.	

BIT RECORD

BIT NO.	22	
SIZE	8 1/2	
MFG.	Reed	
TYPE	SHG-J	
JET 1/32"	10 10 10	
SER. NO.	675172	
DEPTH OUT		
DEPTH IN	5442	
TOTAL FTG.	93	
TOTAL HRS. RUN	5	
COND. 1/8's T. B/ GAGE	R U W	
GPM/ PD–PSI		

MUD RECORD

TIME	0900	1200	1700
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT			
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS	/	/	/
WL –CC'S	1 cone bits 2 jets 12/32		
pH	10.5	8.5	10.5
SOLIDS %	6 cone bits 2 jets 12/32		
	0.5	4.5	0.8

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	NBR	4.40	
1	STB RMR II OD	9.45	FT.
1	D.C. ID STAB	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. STAB OD	5.08	FT.
1	STB RMR 6 1/4 OD	30.31	FT.
1	STAB	4.98	
26	6 1/4 DC	798.73	
1	C/O S	2.15	
37	STANDS DP		FT.
1	SINGLES DP	4837.20	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	5736.98	FT.
WT. OF STRING	208,000	LBS.	

BIT RECORD

BIT NO.	22	
SIZE	8 1/2	
MFG.	Reed	
TYPE	SHG-J	
JETS 1/32"	10 10 10	
SER. NO.	675172	
DEPTH OUT		
DEPTH IN	5442	
TOTAL FTG.	294	
TOTAL HRS. RUN	12 1/2	
COND. 1 8's T 'B' GAGE	R U W	
GPM/ PD–PSI		

MUD RECORD

TIME	1600	1900	2200
WEIGHT	8.5 1/2	8.6	8.6 1/2
PRESSURE GRADIENT	445	445	445
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS	/	/	/
WL –CC'S.	No drilling ops		
pH	drawn bit		
SOLIDS %	operating		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
	Mud		

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCI. PARTIAL COMPLETE
5360	5442				100	50	1600	5 3/4	53			

DEVIATION RECORD: DEPTH 5430 — DEV. 6° — DIRECTION X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		Rig Serv
0015	0515	5		Drlg 8 1/2 Hole
0515	0530	1/4		Survey
0530	0745	2 1/4		Hoist B.T @ 21 – Make Up B.T – 22
0745	0800	1/4		Repair 4" Valve on Standpipe

DRILLER L. Sandquist

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCI. PARTIAL COMPLETE
5442	5453	D			100	35	1600	5 3/4	52			S
5453	5485	D			100	40	1600	5 3/4	52			S
5485	5535	D			100	50	1600	~~5 3/4~~	~~52~~	5 3/4	56	S

DEVIATION RECORD: DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Serv. Rig & BOP
0815	1030	2 1/4		Trip in w/ Bit #22 Caliper Stab.
1030	1100	1/2		Blow Kelly Break Circ. Clean 10' to Btm.
1100	1600	5		Drill 8 1/2" Hole

DRILLER L. Sandquist

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCI. PARTIAL COMPLETE
5535	5573	1			100	50	1600	~~5 3/4~~	~~52~~	5 3/4	56	S
5573	5611	1			100	50	1750			5 3/4	62	S
5611	5736	11			100	50	1800			5 3/4	63	S

DEVIATION RECORD: DEPTH 5664 — DEV. 5 3/4 — DIRECTION X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2200	6		Drill 8 1/2" Hole
2200	2215	1/4		Survey @ 5664 5 3/4°
2215	2230	1/4		Rig Serv. & BOP
2230	2400	1 1/2		Drill 8 1/2" Hole

DRILLER D. Hewitt

APPROVED — APPROVED

A.A.O.D.C.–A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	CDR C-12	03-01-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Tom Cunningham	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5#	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Nsco	H-850	15

LEGAL LAND DESCRIPTION 65-40-130-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M	68 J-55	26	1025		1025
	9 5/8	M-M	43.5#	95	3990		3990

WIRE LINE RECORD — REEL NO.
SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED
FT. CUT OFF — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT
CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	4 1/4	6	7 1/2
3. REAMING	1/2		
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2 1/2		
7. LUBRICATE RIG	1/4	1/4	1/4
8. REPAIR RIG		1/4	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1/2	1/2	1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	6 3/4	8
HRS. W/OPR. D.P.			
HRS. WO D.P.			
HRS. STANDBY			
Boilers	8	1 1/4	8
Camp	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 36
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Hevelo DC OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	
26	6 1/4 DCs	798.73	
1	6 Sub	2.15	
45	STANDS DP	4211.80	FT.
	SINGLES DP		FT.
	KELLY DOWN	22.61	FT.
	TOTAL	5125.00	FT.

WT. OF STRING 195,000 LBS.

BIT RECORD

BIT NO.	21
SIZE	8 1/2
MFG.	Sec
TYPE	M44N
JETS 1 32"	9 11 11
SER. NO.	352823
DEPTH OUT	
DEPTH IN	5016
TOTAL FTG.	109
TOTAL HRS. RUN	4 1/4
COND. 1/8's T B GAGE	1N
GPM, PD–PSI	

MUD RECORD

	0300	0500	0700
TIME			
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.–SEC.	28	29	29
PV YP	/	/	/
GELS.	/	/	/
WL –CC'S.	6	[illegible]	[illegible]
pH		[illegible]	[illegible]
SOLIDS %	[illegible]	[illegible]	[illegible]
	UNDER FLOW 9.7		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	700 LBS		
Benex	4 LBS		
MIXED IN PREMIX TANK			

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR Hevelo DC OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 OD	30.31	FT.
1	Stab.	4.98	
26	6 1/4	798.73	
1	6 Sub	2.15	
46	STANDS DP	4306.32	FT.
	SINGLES DP		FT.
	KELLY DOWN	28.29	FT.
	TOTAL	5225.00	FT.

WT. OF STRING 196,000 LBS.

BIT RECORD

BIT NO.	21
SIZE	8 1/2"
MFG.	Sec.
TYPE	M44N
JET 1 32"	9 11 11
SER. NO.	352833
DEPTH OUT	
DEPTH IN	5016
TOTAL FTG.	709
TOTAL HRS. RUN	10 1/4
COND. 1/8's T B GAGE	RUN
GPM, PD–PSI	

MUD RECORD

	1600	1800	1930
TIME			
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT			
VISC.–SEC.	29	29	29
PV YP	/	/	/
GELS.	/	/	/
WL –CC'S.	10 minutes		
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	NBR	4.40	
1	STB RMR Hevelo DC OD	9.45	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID STAB OD	5.08	FT.
1	STB RMR 6 1/4 OD	30.31	FT.
1	6 STAB	4.98	
26	6 1/4	798.73	
1	C TO	2.15	
47	STANDS DP	4429.76	FT.
1	SINGLES DP	41.00	FT.
1	KELLY DOWN	28.29	FT.
1	TOTAL	5360.00	FT.

WT. OF STRING 197,000 LBS.

BIT RECORD

BIT NO.	21
SIZE	8 1/2
MFG.	SEC
TYPE	M44N
JETS 1 32"	9 11 11
SER. NO.	352833
DEPTH OUT	
DEPTH IN	5016
TOTAL FTG.	344
TOTAL HRS. RUN	17 3/4
COND. 1 8's T B GAGE	RUN
GPM, PD–PSI	

MUD RECORD

	1600	1800	1930
TIME			
WEIGHT	8.6	8.6	8.5 2
PRESSURE GRADIENT			
VISC.–SEC.	29	29	29
PV YP	/	/	9 1/2
GELS.	/	/	5 1/2
WL –CC'S.			9 1/2
pH			9 1/2
SOLIDS %			11

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	22 ton		
Benex	12 lbs.		

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR'TL–P COMPL–C
5016	5125	D			100	50	1600	5 3/4	53			S

DEVIATION RECORD: DEPTH 5070 — DEV. 5 3/4° — DIRECTION X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		Rig Serv.
0015	0115	1		Trip Out DC.s To Recover Dir. Survey
0115	0245	1 1/2		Runin w/ Bit #21
0245	0315	1/2		Break Circ & Clean To Btm 15' Fill
0315	0530	2 1/4		Drlg 8 1/2" Hole
0530	0600	1/2		Survey
0600	0800	2		Drlg 8 1/2 Hole

DRILLER Lo Sandlin

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR'TL–P COMPL–C
5125	5225	D			100	50	1600	5 3/4	53			S

DEVIATION RECORD: DEPTH 5200 — DEV. 5 3/4° — DIRECTION X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Drill 8 1/2" Hole
0900	0915	1/4	1	Serv. Rig & B.O.P.
0915	1300	3 3/4		Drill 8 1/2" Hole
1300	1330	1/2		Survey @ 5200
1330	1430	1		Drill 8 1/2" Hole
1430	1545	1 1/4		Work on Air Lines Frozen To Pump clutches
1545	1600	1/4		Drill 8 1/2" Hole

DRILLER Vegeantamer

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PAR'TL–P COMPL–C
5225	5360	1			100	50	1600	5 3/4	53			

DEVIATION RECORD: DEPTH 5320 — DEV. 6 1/8° — DIRECTION X

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2145	5 3/4		Drill 8 1/2 Hole
2145	2200	1/4	1/4	Survey @ 5320 6 1/8
2200	2215	1/4	1/4	Rig Serv. & BOP's
2215	2400	1 3/4		Drill 8 1/2 Hole

DRILLER Don Hewitt

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
LIANS W.I.K	A1	CDR C12	02-27-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
AMOCO		Pilot Bawen Drilling	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Tom Canning Pusher	

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-1000	18
2	NATIONAL	H-85	15

LEGAL LAND DESCRIPTION 6&8-40-120-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	48 J55	26	1025		1025
9 5/8	MM	43.5	95	3940		3940

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF ~~4000~~ 1002 — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT 222

CUMULATIVE TON MI. OR TRIPS 1837

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7 3/4	7 1/4	2 1/2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			3 3/4
7. LUBRICATE RIG	1/4	1/4	
8. REPAIR RIG			1
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1/2	1/2	1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			1
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	7
HRS. W/OPR. D.P.			
HRS. WO. D.P.			1
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD 35

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	N.B.R.	4.40	
1	STB RMR 12 1/4 OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	FT.
23	6 1/4 DC's	705.78	FT.
1	6 1/4 Sub	2.15	FT.
44	STANDS DP	4024.62	FT.
	SINGLES DP		FT.
	KELLY DOWN	28.25	FT.
	TOTAL	4850	FT.
	WT. OF STRING	182 000	LBS.

BIT RECORD

BIT NO.	20
SIZE	8 1/2
MFG.	HW
TYPE	XDV
JETS 1 32"	10 10 10
SER. NO.	SW186
DEPTH OUT	
DEPTH IN	4542
TOTAL FTG.	308
TOTAL HRS. RUN	17
COND. 1 8's T B GAGE	R T W
GPM PD-PSI	

MUD RECORD

TIME	2400	0400	0600
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT		4440	
VISC.-SEC.	1	29	29
PV YP	3 5	3 5	3 5
GELS.	2 4	2 4	2 4
WL-CC'S.			N/C
pH	4.5	9.5	7.5
SOLIDS %	2	2	2

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	.80	FT.
1	N.B.R.	4.40	
1	STB RMR 12 1/4 OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	FT.
23	6 1/4 DCs	705.78	
1	6 1/4 Sub	2.15	
44	STANDS DP	4148.68	FT.
1	SINGLES DP		FT.
	KELLY DOWN	33.68	FT.
	TOTAL	4980.00	FT.
	WT. OF STRING	186 000	LBS.

BIT RECORD

BIT NO.	20
SIZE	8 1/2
MFG.	HW
TYPE	XDV
JETS 1 32"	10 10 10
SER. NO.	SW186
DEPTH OUT	
DEPTH IN	4542
TOTAL FTG.	438
TOTAL HRS. RUN	24 1/4
COND. 1 8's T B GAGE	1 N
GPM PD-PSI	

MUD RECORD

TIME	1200	1400	
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT	445	445	445
VISC.-SEC.	27	27	27
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.	Tele Drl 1/4 pm		
pH			
SOLIDS %	one Drl 3/4 pm		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8 1/2	80	FT.
1	N.B.R.	4.40	
1	STB RMR 12 1/4 OD	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.98	FT.
23	6 1/4 DCs	705.78	
1	6 1/4 Sub	2.15	
44	STANDS DP	4148.68	FT.
1	SINGLES DP		FT.
	KELLY DOWN	33.68	FT.
	TOTAL	4980.00	FT.
	WT. OF STRING	186 000	LBS.

BIT RECORD

BIT NO.	20	21
SIZE	8 1/2	8 1/2
MFG.	HW	Sec
TYPE	XDV	M44N
JETS 1 32"	10 10 10	9 11 11
SER. NO.	SW186	352893
DEPTH OUT	5016	
DEPTH IN	4542	5016
TOTAL FTG.	474	—
TOTAL HRS. RUN	26 3/4	—
COND. 1 8's T B GAGE	6 3 I	
GPM PD-PSI		

MUD RECORD

TIME	1130	
WEIGHT	9.6	
PRESSURE GRADIENT		
VISC.-SEC.	/	/
PV YP	/	/
GELS.	/	/
WL-CC'S.	10 Cor	12
SOLIDS %	6.0	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-D COM.TC
4718	4850	D			100	50	1500	5 3/4	53			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
4800	6 8	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		DRLg 8 1/2" HOLE
0100	0115	1/4		Rig SER
0115	0500	3 3/4		DRLg 8 1/2 HOLE
0500	0520	1/2		SURVEY @ 4800
0520	0800	2 1/2		DRLg 8 1/2 HOLE

Fuel- 5 ft 4 in

DRILLER T. Sievers

FOOTAGE

FROM	TO	DR.-D RM.-R E..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S. P. M.	METHOD RUN SGL.-S PAR.FL.-D COM.TC
4850	4980	D			100 ~~90~~	50	1500	5 3/4	52			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
4910	6°8°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv'g ✓ BOPs
0815	1230	4 1/4		DRLg 8 1/2" Hole
1230	1300	1/2		SURVEY
1300	1600	3		DRLg 8 1/2" Hole

DRILLER L. Sandquist

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-D COM.TC
4980	5016	D.			100	50	1500	5 3/4	52			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
5010	5 3/4	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1830	2 1/2		DRILL 8 1/2" HOLE
1830	1845	1/4		DIRECTIONAL SURVEY @ 5010'
1845	1915	1/2		TEST FN BIT
1915	2015	1		WELDER REPAIRING BROKEN STABILIZER JAR ON BREAK OUT CATHEAD
2015	2230	2 1/4		FINISH TRIP OUT.
2230	2300	1/2		CHANGE BITS BREAK DOWN MONEL & TELEDRIFT NO SURVEY BARREL
2300	2400	1		TRIP IN W/ DRILL COLLARS

DRILLER Leon Lewis

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Crans Wick	A-1	COR C-12	02-8-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Baldwin Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Tom Lemmonfan

D.P. SIZE	WT./FT	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 I.F.	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-1000	18
2	NATIONAL	H-850	15

LEGAL LAND DESCRIPTION

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M.M	68 J55	26	1025		1025
	9 5/8	M M	43.5	95	3990		3990

WIRE LINE RECORD — REEL NO.

SIZE 1 3/8 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF 900 / 1002 | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 1/4	2 1/4	7 1/4
3. REAMING		1/2	
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2	2	
7. LUBRICATE RIG	1/4	1/4	
8. REPAIR RIG			1/4
9. CUT OFF DRILLING LINE		3/4	
10. DEVIATION SURVEY	1/2		1/2
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION: A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	7 3/4
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			1/4
Boiler	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 34

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2	80	FT.
1	8" Sub	2.65	
	STB RMR OD		FT.
18	D.C. ID 6 1/4 OD	550.60	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	C/O Sub	2.15	
42	STANDS DP		FT.
1	SINGLES DP	396.91	FT.
	KELLY DOWN	23.89	FT.
	TOTAL	4542	FT.

WT. OF STRING 160,000 LBS.

BIT RECORD	
BIT NO.	19
SIZE	8 1/2
MFG.	SEC
TYPE	M44
JETS 1 32"	11 11 11
SER. NO.	245202
DEPTH OUT	4542
DEPTH IN	4098
TOTAL FTG.	444
TOTAL HRS. RUN	22 1/4
COND. 1/8's T B GAGE	8 8 1
GPM/ PD–PSI	

MUD RECORD			
TIME	0100	0400	
WEIGHT	8.5	8.5	8.5
PRESSURE GRADIENT	440	440	440
VISC.–SEC.	33	35	32
PV/YP	/	/	/
GELS	/	/	/
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	10 001b		
BLNCX	8 bg		

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2	80	FT.
1	N.B.R.	4.40	
1	STB RMR Tele Dr8g	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
1	Stab	4.48	
23	6 1/4 DCs	705.78	
1	C/O Sub	2.15	
40	STANDS DP	3774.96	FT.
1	SINGLES DP		FT.
	KELLY DOWN	17.91	FT.
	TOTAL	4590.00	FT.

WT. OF STRING 170,000 LBS.

BIT RECORD	
BIT NO.	20
SIZE	8 1/2
MFG.	H-W
TYPE	XDV
JET 1/32"	10 10 10
SER. NO.	SW-186
DEPTH OUT	
DEPTH IN	4542
TOTAL FTG.	48
TOTAL HRS. RUN	2 1/2
COND. 1/8's T B GAGE	RUN
GPM/ PD–PSI	

MUD RECORD			
TIME	1100	1200	1300
WEIGHT	8.6	8.6	8.7
PRESSURE GRADIENT			
VISC.–SEC.	31	32	31
PV/YP	/	/	/
GELS	/	/	1/4/11/15
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 8 1/2"	80	FT.
1	N.B.R.	4.40	
1	STB RMR Tele Dr8g	9.45	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR Monel OD	29.41	FT.
1	D.C. ID Stab OD	5.08	FT.
1	STB RMR 6 1/4 DC OD	30.31	FT.
33	6 1/4 DCs	1057.8	
1	C/O Sub	2.15	
41	STANDS DP	3899.46	FT.
2	SINGLES DP		FT.
	KELLY DOWN	21.10	FT.
	TOTAL	4711.80	FT.

WT. OF STRING 180,000 LBS.

BIT RECORD	
BIT NO.	20
SIZE	8 1/2"
MFG.	H.W.
TYPE	XDV
JETS 1 32"	10 10 10
SER. NO.	SW-186
DEPTH OUT	
DEPTH IN	4542
TOTAL FTG.	176
TOTAL HRS. RUN	9 3/4
COND. 1 8's T B GAGE	RUN
GPM/ PD–PSI	

MUD RECORD			
TIME	1700	1800	1900
WEIGHT	49	49	49
PRESSURE GRADIENT			
VISC.–SEC.			
PV/YP			
GELS	2 8 14		
WL –CC'S.			
pH	6		
SOLIDS %	6		
	26 KCM		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE FROM / TO | DR.–D RM.–R CORE.–C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. 1: LINER SIZE / S.P.M. | PUMP NO. 2: LINER SIZE / S.P.M. | METHOD RUN: SGL.–S PAR'L–P COM'D–C

FROM	TO										
4458	4542	D			100	38	1300	5 3/4	48		

DEVIATION RECORD: DEPTH 4495 | DEV. 6 1/4 | DIRECTION X

TIME LOG FROM / TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		Rig Ser + check Bops
0015	0215	2		Drill 8 1/2 Hole
0215	0245	1/2		Survey
0245	0600	3 1/4		Drlg 8 1/2 Hole
0600	0800	2		Trip f/ Bit
				Full @ 5 Fr 2 In

DRILLER: [signature]

FOOTAGE FROM / TO | DR.–D RM.–R CORE.–C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. 1: LINER SIZE / S.P.M. | PUMP NO. 2: LINER SIZE / S.P.M. | METHOD RUN: SGL.–S PAR'L–P COM'D–C

FROM	TO										
4542	4590	D			100	40	1300	5 3/4	51		S

DEVIATION RECORD: DEPTH | DEV. | DIRECTION

TIME LOG FROM / TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Hoist Bit #19 (1530–1600 Drlg)
0830	0845	1/4		Rig Servt BOPs + Kelly Cock.
0845	0930	3/4		Slip Cut Drlg Line Cut 102, Slipped 34
0930		1 1/2		Pick Up Monel DC, NBR–Teledrift
	1100			& Position 3 Stabilizers in String
1100	1230	1 1/2		Run in w/ Bit #20
1230	1300	1/2		Break Circ + Clean To Btm (150' Fill)
1300	1500	2		Drlg 8 1/2 Hole

DRILLER: [signature]

EVENING TOUR

FOOTAGE FROM / TO | DR.–D RM.–R CORE.–C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. 1: LINER SIZE / S.P.M. | PUMP NO. 2: LINER SIZE / S.P.M. | METHOD RUN: SGL.–S PAR'L–P COM'D–C

FROM	TO										
4590	4612	D.			100	40	1500	5 3/4	51		
4612	4643	D.			100	45	1500	5 3/4	51		
4643	4718	D			100	50	1500	5 3/4	51		

DEVIATION RECORD: DEPTH 4635 | DEV. 6 1/8° | DIRECTION X | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM / TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1845	2 3/4		Drill 8 1/2" Hole
1845	1915	1/2		Survey @ 4635'
1915	2245	3 1/2		Drill 8 1/2" Hole
2245	2300	1/4		Wait on Air Build up to start motors
2300	2400	1		Drill 8 1/2" Hole

DRILLER: [signature]

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	CDR C-12	02-27-7[illegible]

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Tom Jennings Jr.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6¼	4½ FF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D 1000	18
2	National	8D	18

LEGAL LAND DESCRIPTION

WIRE LINE RECORD — REEL NO. — SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF 900 — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS 1458

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68 J55	26	1025		1025
	9 5/8	MM	43.5	95	3990		3940

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	3¾	16¼	4
3	REAMING	¾		
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS	1½		
7	LUBRICATE RIG	¼	¼	
8	REPAIR RIG			½
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY	½	1	
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	Re-Cores	1¼		
22	Circ Sample	½	¾	
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	6¾	8	7¼
HRS. W/OPR. D.P.			
HRS. WO./D.P.	1¼		
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Tioga	8		8
TOTAL DAY WORK		0	

NO. OF DAYS FROM SPUD: 33

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	B.T Sub	2.65	
	STB RMR OD		FT.
18	D.C. ID 6¼ OD	550.60	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	C/O 6¼	2.15	
38	STANDS DP		FT.
1	SINGLES DP	3587.71	FT.
	KELLY DOWN	41.69	FT.
	TOTAL	4180	FT.

WT. OF STRING 122000 LBS.

BIT RECORD

BIT NO.	19
SIZE	8½
MFG.	SEC
TYPE	M44
JETS 1 32"	11 11 11
SER. NO.	245602
DEPTH OUT	
DEPTH IN	4098
TOTAL FTG.	82
TOTAL HRS. RUN	3¾
COND. 1/8's T.B. GAGE	1 0 N
GPM/ PD–PSI	

MUD RECORD

TIME	0300	0500	0700
WEIGHT	84	84	85
PRESSURE GRADIENT	440	440	440
VISC.–SEC.	28	28	28
PV/YP	/	/	/
GELS	/	/	/
WL–CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL–S PARTEL–P COM D-C
4098	4080	D		CORE NO. 2 22'	100	40	1000	5¾	48			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
4150	7½°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	¼		R.g Ser — Core # 2
0015	0130	1¼		Recover Core #2 — 4060 - 4098
0130	0300	1½		Trip in w/ B.T — Cut 38' Rec 22'
0300	0345	¾		Ream 98' Rat Hole
0345	0615	2½		Drlg 8½" Hole
0615	0645	½		Survey @ 4120
0645	0800	1¼		Drill 8½ Hole
				Fuel 6' 3"

DRILLER: H Spoors

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	B.T Sub	2.65	
	STB RMR OD		FT.
18	D.C. ID 6¼ OD	550.60	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	C/O Sub	2.15	
40	STANDS DP	3774.96	FT.
1	SINGLES DP		FT.
	KELLY DOWN	10.84	FT.
	TOTAL	4342.00	FT.

WT. OF STRING 154,000 LBS.

BIT RECORD

BIT NO.	19
SIZE	8½
MFG.	Sec
TYPE	M44N
JET 1/32"	11 11 11
SER. NO.	245602
DEPTH OUT	
DEPTH IN	4098
TOTAL FTG.	244
TOTAL HRS. RUN	10
COND. 1/8's T.B. GAGE	R O N
GPM/ PD–PSI	

MUD RECORD

TIME	0900	1200	1500
WEIGHT	8.5	8.5	8.6
PRESSURE GRADIENT	440	440	445
VISC.–SEC.	28	28	33
PV/YP	/	/	/
GELS	/	/	/
WL–CC'S	Cone Dec 1 3/4 p.m		
pH	Under flow 12		
SOLIDS %	Cone Dec 13 p.m		
	Duck Pond 8.5 Under Flow 12.3		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bench	20 Bbls		
Gel	2½ Tons		

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL–S PARTEL–P COM D-C
4180	4342	D			100	35/40	1050	5¾	48			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
4200	7⅞°	X	4330	6¾°	X			

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	¼		R.g Serv ✓ B.O.P's
0815	0930	1¼		Drlg 8½" Hole
0930	1000	½		Survey & Clean Drwks. Lubricators
1000	1445	4¾		Drlg 8½" Hole
1445	1515	½		Survey
1515	1545	½		Circ Sample @ 4339
1545	1600	¼		Drlg 8½" Hole

DRILLER: L Sandquist

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 8½	.80	FT.
1	B.T Sub	2.65	
	STB RMR OD		FT.
18	D.C. ID 6¼" OD	550.60	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	C/O Sub	2.15	
41	STANDS DP	3868.08	FT.
1	SINGLES DP		FT.
	KELLY DOWN	33.12	FT.
	TOTAL	4458.00	FT.

WT. OF STRING 156,000 LBS.

BIT RECORD

BIT NO.	19
SIZE	8½"
MFG.	Sec.
TYPE	M44N
JETS 1-32"	11 11 11
SER. NO.	245602
DEPTH OUT	
DEPTH IN	4098
TOTAL FTG.	360
TOTAL HRS. RUN	17
COND. 1. 8's T.B. GAGE	R O N
GPM/ PD–PSI	

MUD RECORD

TIME	1700	2000	2300
WEIGHT	8.6	8.6	8.6
PRESSURE GRADIENT			
VISC.–SEC.	29	33	34
PV/YP	/	/	/
GELS	/	/	/
WL–CC'S	Cone Dec 1 3/4 p.m		
pH	Under flow 11.4		
SOLIDS %	6 Cone Dec 13 p.m		
	Duck Pond 8.5 Under Flow 12.3		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	2000 LBS.		
Lime	16 LBS.		

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL–S PARTEL–P COM D-C
4342	4458		2		100 to 105			5¾	48			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1830	2½		Drill 8½" Hole
1830	1845	¼		Repair Air Line
1845	2000	1¼		Drill 8½" Hole
2000	2045	¾		Circ. Sample @ 4410
2045	2400	3¼		Drill 8½" Hole

DRILLER: [illegible]

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cudahy	A1	COR C-12	2-26-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	Peter Bawden Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Tom Lemmon Jr.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-1000	18
2	NATIONAL	H 840	13

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	48 J55	26	1025		1025
	9 5/8	MM	43.5	95	3990		3990

WIRE LINE RECORD — SIZE 1 3/8; NO. LINES 10; FT. SLIPPED 68; FT. CUT OFF 400; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS 1438

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL			
3	REAMING			
4	CORING	5 1/4	3 1/2	3 1/2
5	CONDITION MUD & CIRCULATE	1/2		
6	TRIPS	2	3/4	2 1/2
7	LUBRICATE RIG	1/4	1/4	
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	W.O.O.		3/4	
22	Misc		3/4	2
23				
COMPLETION	A. PERF'R'T'N			
	B. TEG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

PAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	6
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 32

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT ◇	.98	FT.
	CORE BBLS	64.34	
	STB RMR Subs OD	82	FT.
	D.C. ID TSub OD	267	FT.
	STB RMR Jars OD	7.48	FT.
18	D.C. ID 6 4 OD	549.67	FT.
1	STB RMR Sub OD	2.15	FT.
36	STANDS DP		FT.
1	SINGLES DP	3400 55	
	KELLY DOWN	32.94	FT.
	TOTAL	4060	FT.
WT. OF STRING		148 000	LBS.

BIT RECORD

BIT NO.	10
SIZE	8 13/32
MFG.	Chr. S
TYPE	100-428
JETS 1 32"	
SER. NO.	EC57108
DEPTH OUT	4060
DEPTH IN	4000
TOTAL FTG.	60
TOTAL HRS. RUN	5 1/4
COND. 1/8's T/B. GAGE	Good
GPM/ PD-PSI	

MUD RECORD

TIME	2000	0400	0600
WEIGHT	8.7	8.7	8.7
PRESSURE GRADIENT	450	420	420
VISC.-SEC.	34	33	33
PV/YP	/	/	/
GELS.	/	/	/
WL -CC'S.	/	/	/
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR-FL COM-D-C
4000	4060	C	1		80	18	1000	5 3/4	50			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		Rig Ser + Check Bops
0015	0045	1/2		Cir + Core Bbls
0045	0600	5 1/4		Cutting Core #1
0600	0800	2		Hoist Core #1

Core #1 4000-4060 Cut 60' Rec 60'

Fuel 36"

Change Water Pump Packings #4 Motor

DRILLER: T. Speers

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 08 32	.98	FT.
1	Core BBL	64.34	
1	STB RMR D.P. OD	.82	FT.
1	D.C. ID BS Sub OD	2.65	FT.
1	STB RMR Jars OD	7.48	FT.
18	D.C. ID 6 4 OD	549.67	FT.
1	STB RMR F/O OD	2.15	FT.
36	STANDS DP	3431.56	FT.
2	SINGLES DP		FT.
	KELLY DOWN	27.33	FT.
	TOTAL	4087.00	FT.
WT. OF STRING		149,500	LBS.

BIT RECORD

BIT NO.	18 RR
SIZE	8 13/32
MFG.	Christ
TYPE	◇ 100-428
JET 1/32"	
SER. NO.	EC-57108
DEPTH OUT	4060
DEPTH IN	4000
TOTAL FTG.	87
TOTAL HRS. RUN	8 3/4
COND. 1/8's T/B GAGE	Pump
GPM/ PD-PSI	

MUD RECORD

TIME	1300		
WEIGHT	7.7	7.7	7.7
PRESSURE GRADIENT	450	445	445
VISC.-SEC.		32	32
PV/YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR-FL COM-D-C
4060	4087	C	2		80	18	1000	5 3/4	50			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Hoist Core #1
0830	0930	1		Recover Core, Full Recover (60') Box
0930	1000	1/2		Serv. Core Bbl + Check Bit
1000	1015	1/4		Rig Serv. + K BOPs + Kelly Cock.
1015	1100	3/4		Wait on Orders.
1100	1215	1 1/4		Run in w/ Core Bbl + Jars.
1215	1230	1/4		Break Circ Circ + Drop Ball
1230	1600	3 1/2		Cut Core #2

DRILLER: T. Sandquist

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 08 32	.98	FT.
1	Core Bbl	64.34	
1	STB RMR Sub OD	82	FT.
1	D.C. ID Sub OD	265	FT.
1	STB RMR Jars OD	7.48	FT.
18	D.C. ID 6 4 OD	549.67	FT.
1	STB RMR F/O OD	2.15	FT.
36	STANDS DP	3431.56	FT.
2	SINGLES DP	38.35	FT.
	KELLY DOWN		FT.
	TOTAL	4098.00	FT.
WT. OF STRING		148,000	LBS.

BIT RECORD

BIT NO.	18 RR
SIZE	8 13/32
MFG.	CHRIST
TYPE	◇ 100-428
JETS 1/32"	
SER. NO.	EC57108
DEPTH OUT	4098
DEPTH IN	4000
TOTAL FTG.	98
TOTAL HRS. RUN	12 1/4
COND. 1.8's T/B' GAGE	Good
GPM/ PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.			
PV/YP	/	/	/
GELS.	/	/	/
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR-FL COM-D-C
4087	4098	C	2		80	18	1000	5 3/4	50			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1800	2		Cut Core #2
1800	2000	2		Work on Pumps (Cleaning out Gravel + Rubber)
2000	2130	1 1/2		Cut Core
2130	2400	2 1/2		Trip Out w/ Core Bbl.

DRILLER: T. Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Brunswick	A-4	CDR C-12	02-25-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
AMOCO		PETER BAWDEN DRLG	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH

LEGAL LAND DESCRIPTION 40-13S-65-W5

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB TO CSG. HD.	SET AT
6 5/8		40	63	2647		

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'NL			
G.			
TOTALS			

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	
HRS. W/OPR. D.P.	
HRS. WO/D.P.	
HRS. STANDBY	
TOTAL DAY WORK	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	
TOTAL MUD COST	

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.			
SIZE			
MFG.			
TYPE			
JETS 1/32"			
SER. NO.			
DEPTH OUT			
DEPTH IN			
TOTAL FTG.			
TOTAL HRS. RUN			
COND. 1/8's T/B. GAGE			
GPM/ PD–PSI			

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.–SEC.			
PV/YP			
GELS.			
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.			
SIZE			
MFG.			
TYPE			
JET 1/32"			
SER. NO.			
DEPTH OUT			
DEPTH IN			
TOTAL FTG.			
TOTAL HRS. RUN			
COND. 1/8's T/B GAGE			
GPM/ PD–PSI			

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.–SEC.			
PV/YP			
GELS.			
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.			
SIZE			
MFG.			
TYPE			
JETS 1/32"			
SER. NO.			
DEPTH OUT			
DEPTH IN			
TOTAL FTG.			
TOTAL HRS. RUN			
COND. 1 8's T.B. GAGE			
GPM/ PD–PSI			

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.–SEC.			
PV/YP			
GELS.			
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PART'L–P COMP'D–C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
				PRESS TEST TOP KELLY COCK - 4000 = OK
				" HYDRIL - 4000 PSI
				" PIPE RAMS - 4000 HELD OK
				" TEST INSIDE BOP CHOKE 4000 - BLED TO 3600 IS OK
				PRESSURE TEST CSG TO 4000PSI - 15MIN OK
				" MANIFOLD VALVES 4000PSI - 15 MIN OK
				PRESS TEST BLIND RAMS - 15MIN - 4000 HELD OK

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PART'L–P COMP'D–C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
				PRESS TEST 3" HYDRAULIC VALVE ON BOP STACK TO 4000 PSI HELD OK

DRILLER

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PART'L–P COMP'D–C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DRILLER

Form 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A1	CDR C-12	12-22-77

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
	Tom Cunningham

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 1/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	H-850	15

LEGAL LAND DESCRIPTION: 65-40-131-45

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8	MM	68 J55	26	1025		1025
	9 5/8	MM	43.5	95	3990		3990

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
FT. CUT OFF		PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT		
CUMULATIVE TON MI. OR TRIPS		

TIME DISTRIBUTION — HOURS

CODE NO. — OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL		3 1/4	
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE		1/2	
6. TRIPS	3 1/2	2	5 1/2
7. LUBRICATE RIG			
8. REPAIR RIG			1/2
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.	1/2		
15. TEST B.O.P.	1	1 1/2	
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK n/s			3 1/2
21. Rig Service	2		
Circ Sample		3/4	
Drlg Out		2 1/2	
COMPLETION A. PERF'R'TN			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	6 1/2	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY	1/2		
Boilers	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 31
CUMULATIVE ROTATING HRS.
TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — MORNING TOUR

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD — MORNING TOUR

BIT NO.	17
SIZE	8 1/2
MFG.	HW
TYPE	X1G
JETS 1 32"	10 10 10
SER. NO.	FJ612
DEPTH OUT	
DEPTH IN	3990
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T/B GAGE	
GPM/ PD-PSI	

MUD RECORD — MORNING TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION — MORNING TOUR

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-SP PAR'FL-P COM'D-C
3990												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — MORNING TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0130	1 1/2		Nipple up Bops
0130	0230	1		Pressure Test Blind Rams Hydralic Valve
				+ Flare Line man. fold To 4000PSI + Casing
0230	0400	1 1/2		Run In D.C. + 45 Stds Pipe
0400	0600	2		Blow Kelly + Try To Break Circ (Plugged
0600	0800	2		Trip Out

DRILLER: H. Jones

DRILLING ASSEMBLY (At end of tour) — DAY TOUR

NO.			
1	BIT 8 1/2	1.00	FT.
1	B.T Sub	2.65	FT.
	STB RMR OD		FT.
18	D.C. ID 6" OD	550.60	FT.
	STB RMR 9 0 OD	2.15	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
36	STANDS DP	3431.56	FT.
2	SINGLES DP		FT.
	KELLY DOWN	12.04	FT.
	TOTAL	4000.00	FT.
WT. OF STRING		139,000	LBS.

BIT RECORD — DAY TOUR

BIT NO.	18
SIZE	8 1/2
MFG.	H.W
TYPE	X1G
JET 1 32"	10 10 10
SER. NO.	FJ-612
DEPTH OUT	4000
DEPTH IN	3990
TOTAL FTG.	10
TOTAL HRS. RUN	3/4
COND. 1/8's T/B GAGE	1 1 1
GPM/ PD-PSI	

MUD RECORD — DAY TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	4.55 0.6
VISC.-SEC.	
PV/YP	
GELS.	
WL-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bicarb	LBS		
	LBS		

FOOTAGE / FORMATION — DAY TOUR

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-SP PAR'FL-P COM'D-C
3990	4000	D			100	30	2050	5 1/2				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — DAY TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Un Plug B.T + Run in To Press Test.
0900	0930	1/2		Break Circ & Circ
0930		1 1/2		Press Test Hydril To 4000PSI. H/E
	1100			Press Test 5" Pipe Rams To 4000PSI & OKE
1100	1200	1		Run in w/ B.T Plug @ 3895
1200	1430	2 1/2		Break Circ & Drlg Out Plug Float Cement/S
1430	1515	3/4		Drlg 8 1/2" Hole
1515	1600	3/4		Circ Sample @ 4000

DRILLER: L. Sanders

DRILLING ASSEMBLY (At end of tour) — EVENING TOUR

NO.			
1	BIT O	98	FT.
Core Bbl		64.34	
Drl Sub	OD	82	FT.
Bit Sub	OD	267	FT.
Jars	OD	718	FT.
18	D.C. ID 6 1/4	549.67	FT.
1	STB Sub OD	2.15	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
35	STANDS DP	3334.18	FT.
2	SINGLES DP		FT.
	KELLY DOWN	37.42	FT.
	TOTAL	4000.00	FT.
WT. OF STRING			LBS.

BIT RECORD — EVENING TOUR

BIT NO.	18
SIZE	8 3/32
MFG.	CHRIST. D
TYPE	100428
JETS 1/32"	
SER. NO.	EC57108
DEPTH OUT	
DEPTH IN	4000'
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T/B GAGE	
GPM/ PD-PSI	

MUD RECORD — EVENING TOUR

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL-CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE / FORMATION — EVENING TOUR

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-SP PAR'FL-P COM'D-C
4000												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — EVENING TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1845	2 3/4		Trip out to Core.
1845	2100	2 1/4		Lick up Core Bbl's Jars.
2100	2330	2 1/2		Trip in w/ Core Bbl.
2330	2400	1/2		Work on Pump - wood chip under valve one valve washed

DRILLER: T. Jones

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

KODAK SAFETY FILM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Grainswick	A-1	COR C-12	02-24-72

OPERATOR: Amoco — SIGNATURE OF OPERATOR'S REPRESENTATIVE:

CONTRACTOR: Peter Bawden Drlg — SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Tom Cunningham — RIG NO. 31

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 1/4	IF 4 1/2	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
	National	H 850	18

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RTB. TO CSG. HD.	SET AT
	12 3/8	MM	68 J55	26	1025		1025
	9 5/8	M-M	43.5	95	3990		3990

WIRE LINE RECORD — REEL NO.
SIZE 1 1/4 — NO. LINES 10 — FT. SLIPPED 68
FT. CUT OFF 900 — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT 1191
CUMULATIVE TON MI OR TRIPS 1191

TIME DISTRIBUTION - HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL			
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS			
7	LUBRICATE RIG		1/4	
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			5
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	Misc	8	7 3/4	3
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS STANDBY BY BAWDEN EXPENSE	24 HRS.		
Boilers	8	8	8
CAMP	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK			
NO. OF DAYS FROM SPUD	30		
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DRILLING ASSEMBLY (At end of tour) / BIT RECORD / MUD RECORD

MORNING TOUR

DRILLING ASSEMBLY: BIT ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; STANDS DP ___ FT.; SINGLES DP ___ FT.; KELLY DOWN ___ FT.; TOTAL ___ FT.; WT. OF STRING ___ LBS.

BIT RECORD: BIT NO. ___; SIZE ___; MFG. ___; TYPE ___; JETS 1/32" ___; SER. NO. ___; DEPTH OUT ___; DEPTH IN ___; TOTAL FTG. ___; TOTAL HRS. RUN ___; COND. 1/8's T.B. GAGE ___; GPM PD-PSI ___

MUD RECORD: TIME ___; WEIGHT ___; PRESSURE GRADIENT ___; VISC.-SEC. ___; PV YP ___; GELS ___; WL -CC'S ___; pH ___; SOLIDS % ___

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.

DAY TOUR

DRILLING ASSEMBLY: BIT ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; STANDS DP ___ FT.; SINGLES DP ___ FT.; KELLY DOWN ___ FT.; TOTAL ___ FT.; WT. OF STRING ___ LBS.

BIT RECORD: BIT NO. ___; SIZE ___; MFG. ___; TYPE ___; JET 1/32" ___; SER. NO. ___; DEPTH OUT ___; DEPTH IN ___; TOTAL FTG. ___; TOTAL HRS. RUN ___; COND. 1/8's T.B. GAGE ___; GPM PD-PSI ___

MUD RECORD: TIME ___; WEIGHT ___; PRESSURE GRADIENT ___; VISC.-SEC. ___; PV YP ___; GELS ___; WL -CC'S ___; pH ___; SOLIDS % ___

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.

EVENING TOUR

DRILLING ASSEMBLY: BIT ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; D.C. ID OD ___ FT.; STB RMR OD ___ FT.; STANDS DP ___ FT.; SINGLES DP ___ FT.; KELLY DOWN ___ FT.; TOTAL ___ FT.; WT. OF STRING ___ LBS.

BIT RECORD: BIT NO. 17; SIZE 8 1/2; MFG. H.W.; TYPE X1G; JETS 1/32" 10 10 10; SER. NO. FJ612; DEPTH OUT ___; DEPTH IN 3990; TOTAL FTG. ___; TOTAL HRS. RUN ___; COND. 1 8's T B/ GAGE ___; GPM/ PD-PSI ___

MUD RECORD: TIME ___; WEIGHT ___; PRESSURE GRADIENT ___; VISC.-SEC. ___; PV/YP ___; GELS ___; WL -CC'S ___; pH ___; SOLIDS % ___

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.

MORNING TOUR

FOOTAGE FROM 3990 TO ___ — DR'D RM'R CORE'C — CORE NO. — FORMATION (SHOW CORE RECOVERY): 24 HRS RIG TIME AT PETER BAWDEN EXPENSE — ROTARY RPM — WT. ON BIT 1000# — PUMP PRESS — PUMP NO. LINER SIZE / S.P.M. — PUMP NO. LINER SIZE / S.P.M. — METHOD RUN

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0300	3		Tighten bolts on spool + pack off around Casing
0300	0800	5		Rig up floor + Lay Down 7" D.C.'s + Pick up 6" D.C.'s
		8		HRS WAIT ON BAWDEN SPOOL RIG TIME AT BAWDEN EXPENSE

DRILLER J. Speers

DAY TOUR

FOOTAGE FROM 3990 TO ___ — DR'D RM'R CORE'C — CORE NO. — FORMATION (SHOW CORE RECOVERY) — ROTARY RPM — WT. ON BIT 1000# — PUMP PRESS — PUMP NO. LINER SIZE / S.P.M. — PUMP NO. LINER SIZE / S.P.M. — METHOD RUN

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv
0815	1500	6 3/4		Pick up 30-6" D.C.'s + Torque to 6000
1500	1600	1		Pick up Kelly Install Kelly Hose + Prepare to Press Test Kelly Cock & Stabbing Valve & Lower Kelly Cock.
		8		HRS - BAWDEN EXPENSE

DRILLER L. Sandquist

EVENING TOUR

FOOTAGE FROM 3990 TO ___ — DR'D RM'R CORE'C — CORE NO. — FORMATION (SHOW CORE RECOVERY) — ROTARY RPM — WT. ON BIT 1000# — PUMP PRESS — PUMP NO. 1 LINER SIZE 5 3/4 / S.P.M. — PUMP NO. 2 LINER SIZE 5 3/4 / S.P.M. — METHOD RUN

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		Press. Test Kelly Cock, Stabbing Valve & Lower Kelly Cock to 2500 P.S.I. Held O.K.
1700	1900	2		Rig to Press Above to 4000 P.S.I. w. Hydralic Manual Pump. Pump not working Tear Out
1900	2400	5		Raise D.P. Pick up Spool + Flange & Nipple up

DRILLER L. Sandquist

FORM 3TE — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 30

LEASE: CRANSWICK | WELL NO.: A-1 | API WELL NUMBER: CDR C-12 | DATE: FEB 23-72

OPERATOR: AMOCO | CONTRACTOR: PETER BAWDEN | RIG NO.: 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J. Hebert

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerlin

D.P. SIZE	WT., FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D1000	18"
2	NATCO	11850	15"

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT	8	8	
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			5
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
COMPLETION B. TBG TRIPS			
COMPLETION C. TREATING			
COMPLETION D. SWABBING			
COMPLETION E. TESTING			
COMPLETION F. ADDIT'N'L			
COMPLETION G.			
TOTALS	8	8	5

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
BOILERS	8	8	8
TIOGA HEATER	8	8	8
CAMP	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 29

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO. | SIZE | MFG. | TYPE | JETS 1 32" | SER. NO. | DEPTH OUT | DEPTH IN | TOTAL FTG. | TOTAL HRS. RUN | COND. 1 8's T B GAGE | GPM PD-PSI

MUD RECORD

TIME | WEIGHT | PRESSURE GRADIENT | VISC-SEC | PV-YP | GELS | WL-CC'S | pH | SOLIDS %

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	1300 LBS.		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO. | SIZE | MFG. | TYPE | JET 1 32" | SER. NO. | DEPTH OUT | DEPTH IN | TOTAL FTG. | TOTAL HRS. RUN | COND. 1 8's T B GAGE | GPM PD-PSI

MUD RECORD

TIME | WEIGHT | PRESSURE GRADIENT | VISC-SEC | PV-YP | GELS | WL-CC'S | pH | SOLIDS %

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO. | SIZE | MFG. | TYPE | JETS 1 32" | SER. NO. | DEPTH OUT | DEPTH IN | TOTAL FTG. | TOTAL HRS. RUN | COND. 1 8's T B GAGE | GPM PD-PSI

MUD RECORD

TIME | WEIGHT | PRESSURE GRADIENT | VISC-SEC | PV-YP | GELS | WL-CC'S | pH | SOLIDS %

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL D... LY DRILLING REPORT FORM

LEGAL LAND DESCRIPTION: 65-40-131-45

WIRE LINE RECORD — REEL NO.

SIZE 13/8 | NO. LINES 10 | FT. SLIPPED | FT. CUT OFF | PRESENT LENGTH | TON MI. OR TRIPS SINCE LAST CUT | CUMULATIVE TON MI. OR TRIPS

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MN	68 #55	26	1025		1025

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METH RU SGL PART COM
3990												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0145	1 3/4		RIG UP & PREPARE TO RUN 9 5/8" CASING
0145	0600	6 1/4		MAKE UP FLOAT SHOE & COLLAR & RUN CASING

DRILLER: T. Spears

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METH RU SGL PART COM
3990	CSG DEPTH											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1000	2		RUN 9 5/8" CSG.
1000	1200	2		BREAK CIRC, CIRC & WORK PIPE
1200	1600	4		CEMENTING & PUMP PLUG DOWN @ SET 9 5/8" CSG SHOE @ 5:00 pm. FEB 23-72

DRILLER: L. Sanders

FOOTAGE / FORMATION

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METH RL SGL PART COM
3990	CSG DEPTH.											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2000	4		& RAISE SAME CHANGE 9 5/8 RAMS TO 5" DISMANTLE B.O
[illegible]				[illegible]
2000	2100	1		CUT OFF CSG LAY DOWN SAME
2100	2200	1		LAY DOWN 2 SPOOLS & DRILLING FLANGE
2200	2400	2		PICK UP 2 NEW SPOOLS & DRILLING FLANGE

SUPER: [illegible]

DAILY DRILLING REPORT — REPORT NO. 29

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	CDR C-12	02-22-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D 1000	18
2	NSCO	A 850	15

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68 J55	26	1025	KB	1025

WIRE LINE RECORD — REEL NO.

SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT: 1136

CUMULATIVE TON MI. OR TRIPS: 1136

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN	6 1/4		1 1/2
2	DRILL ACTUAL	7 1/4		
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE		1	
6	TRIPS		2 3/4	
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY		1/4	
11	WIRE LINE LOGS		3 1/2	
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	CIR SAMP	1/4		
22	Rig Service		1/2	
22	Rig repair OK			1/2
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	4	5 1/2
HRS. W/OPR. D.P.		4	2 1/2
HRS. W/O D.P.			
HRS. STANDBY			
CAMP	8	8	8
BOILER	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 28

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	
1	BIT 12 1/4 NBR	2.20 FT.	BIT NO.	16
1	STB RMR STAB OD 12 1/4	3.90	SIZE	12 1/4
1	STB RMR MONEL OD	24.77 FT.	MFG.	SEC
1	D.C. ID 5" STAB OD	6.20 FT.	TYPE	M44
1	STB RMR SHOCK OD	9.13 FT.	JETS 1 32"	14 14 14
1	D.C. ID 5" STAB OD	30 65 / 6.20 FT.	SER. NO.	324785
1	STB RMR 9" OD	208.81 FT.	DEPTH OUT	3990
10	7" DC	307.31	DEPTH IN	3890
1	C/O SUB	1.00	TOTAL FTG.	100
			TOTAL HRS. RUN	7 1/4
36	STANDS DP	3368.93 FT.	COND. 1/8's T'B' GAGE	
X	SINGLES DP	FT.	GPM. PD-PSI	
1	KELLY DOWN	11.00 FT.		
1	TOTAL	3990. FT.		
WT. OF STRING		184000 LBS.		

MUD RECORD

TIME	[illegible]	0400	0600
WEIGHT	9.0	9.0	9.0
PRESSURE GRADIENT			
VISC.-SEC.	46	51	53
PV/YP	/	/	/
GELS	/	/	/
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
gel	1 ton		
[illegible]	10 ft³		
soda ash	200 lbs		

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	
1	BIT	1.50 FT.	BIT NO.	16
1	NBR	6.20	SIZE	12 1/4
1	STB RMR SUB OD	3.80 FT.	MFG.	SEC.
1	D.C. ID STAB OD	4.65 FT.	TYPE	M44
1	STB RMR MONEL OD	24.77 FT.	JET 1. 32"	14 14 14
1	D.C. ID STAB OD	6.20 FT.	SER. NO.	324795
1	STB RMR SHOCK OD	9.13 FT.	DEPTH OUT	3790
1	9" DC	30.65	DEPTH IN	3690
1	STAB	6.20	TOTAL FTG.	100
7	9"	208.81	TOTAL HRS. RUN	7 1/4
10	9"	307.31	COND. 1/8's T'B' GAGE	3 2 1
36	STANDS DP	3369.93 FT.	GPM. PD-PSI	
	SINGLES DP	FT.		
1	KELLY DOWN	11.00 FT.		
	TOTAL	3990 FT.		
WT. OF STRING		184000 LBS.		

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	/
GELS	/
WL -CC'S	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	
	BIT	FT.	BIT NO.	
			SIZE	
	STB RMR OD	FT.	MFG.	
	D.C. ID OD	FT.	TYPE	
	STB RMR OD	FT.	JETS 1/32"	
	D.C. ID OD	FT.	SER. NO.	
	STB RMR OD	FT.	DEPTH OUT	
			DEPTH IN	
			TOTAL FTG.	
			TOTAL HRS. RUN	
	STANDS DP	FT.	COND. 1/8's T'B' GAGE	
	SINGLES DP	FT.	GPM. PD-PSI	
	KELLY DOWN	FT.		
	TOTAL	FT.		
WT. OF STRING		LBS.		

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	/
GELS	/
WL -CC'S	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR-D RM-R CORE-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL-S PART'L-P COMP'D-C
3890	3990	I			120	70	1900	5 3/4	58	5 3/4	62	C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0715	7 1/4		DRILL
0715	0800	3/4		CIR. BTM. HOLE SAMPLE @ 3990

FUEL 3.9"

DRILLER: D Hawks

DAY TOUR

FOOTAGE

FROM	TO	DR-D RM-R CORE-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL-S PART'L-P COMP'D-C
3790								5 3/4	57	5 3/4	61	C
								5 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
3790								

TIME LOG

FROM	TO	TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		CIRC HOLE CLEAN TO LOG 3990
0900	0915	1/4		SURVEY
0915	1200	2 3/4		TRIP TO LOG W/ SCHLUMBERGER DIFF 4-64
	1530	3 1/2		RIG UP SCHLUMBERGER
1530	1600	1/2		TEAR OUT SCHLUMBERGER
				BIT PULLED TO LOG.

DRILLER

EVENING TOUR

FOOTAGE

FROM	TO	DR-D RM-R CORE-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PART'L-P COMP'D-C
3990												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600				RUN IN 9" DCs
				LAYDOWN 9" DCs BREAK & LAYDOWN
				STABILIZERS & REAMER.
	2130	5 1/2		RUN IN 11" DCs & LAYDOWN SAME.
		2 1/2		RIG TO RUN 9 5/8 CSG & CHANGE PIPE
2130	2400	2 1/2		RAMS & ETC. RECOVERED CSG BOWL
				GUIDE

DRILLER: L. Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT REPORT NO. 28

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	CJR C-12	02-21-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Glanstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [illegible]

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
195"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	J 1000	18
2	NSCO	H 850	15

LEGAL LAND DESCRIPTION: 65-70-13 W5

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M	68 J55	24	1025	KB	1025

WIRE LINE RECORD REEL NO.

SIZE 13/8 NO. LINES 10 FT. SLIPPED 68

FT. CUT OFF 900 PRESENT LENGTH 6,600

TON MI. OR TRIPS SINCE LAST CUT 1006

CUMULATIVE TON MI. OR TRIPS 1006

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			1/2
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1 1/2		2 1/2
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS	6 1/4	8	5
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Rig Loggers			1/4
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	
HRS. W/OPR. D.P.	
HRS. WO. D.P.	
HRS. STANDBY	
BOILER	8 8 8
CAMP	8 8 8
LLOGA	8 8 8
TOTAL DAY WORK	8 8 8
NO. OF DAYS FROM SPUD	26 27
CUMULATIVE ROTATING HRS.	102 111.5
TOTAL MUD COST	

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D.C
3890												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0130	1 1/2		HOIST OUT
0130	0145	1/4		RIG UP LOGGERS
0145	0800	6 1/4		LOGGING

DRILLER D Hawks

DAY TOUR (continued)

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D.C
3890												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1630	8		Logging w/ Schlumberger
				BHC Sonic 3887-1025 BHT 127° 2"@5"
				DIL 3882-1025 128° 2@5
				SNP 3888-1025 128° "
				HDT 3884-1027 "
				FDC 3888-1025 129° "

DRILLER H Lopez

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

1	BIT 12 1/4"	1.50	FT.
1	STB RMR	6.20	FT.
1	STB RMR	3.80	FT.
1	D.C. 9" ID	9.65	FT.
1	STB RMR	2.77	FT.
1	D.C. 9" ID	6.20	FT.
1	STB RMR	9.13	FT.
1	D.C. 9" ID	30.65	FT.
1	Tab	6.20	FT.
7	STB RMR 9" DC	208.81	FT.
10	7" DCs	307.31	FT.
1	Sub	1.00	FT.
24	STANDS DP	3243.26	FT.
2	SINGLES DP		FT.
	KELLY DOWN	36.52	FT.
	TOTAL	3890	FT.
	WT. OF STRING	184,000	LBS.

BIT RECORD

BIT NO.	16
SIZE	12 1/4
MFG.	SEC
TYPE	M44
JETS 1 32"	14/14/14
SER. NO.	324795
DEPTH OUT	
DEPTH IN	3890
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL'S PARFL'S COMP'D.C
3890				Logs 1 set, film sent to Calgary & to Grande Prairie.				5 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2100	5		Logging w/ Schlumberger Tear Out
2100				Make up B.T. Pick up 3 pt NB Reamer
	2330	2 1/2		Exchange BTm. Stabilizer & Run In.
2330	2400	1/2		Break Circ & Clean To BTm.

DRILLER [illegible]

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 27

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	CDR C-12	02-20-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Gunstain

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerbes

LEGAL LAND DESCRIPTION: 03-10S-13S-45

D.P. SIZE	WT. FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 5/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D 1000	18
2	NSCO	1495 D	18

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68 J55	24	1023	KB	1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
7/8	10	68'

FT. CUT OFF: 400 — PRESENT LENGTH: 660

TON MI. OR TRIPS SINCE LAST CUT: 1006

CUMULATIVE TON MI. OR TRIPS: 1006

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 1/2	4 1/2	2
3. REAMING		1/2	
4. CORING			
5. CONDITION MUD & CIRCULATE			1 1/2
6. TRIPS	3 1/2	2	2 3/4
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			1/2
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
15. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. PICK UP DRILL	1		
22. SLIP LINE		3/4	
23. TIC SAND			1
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO D.P.			
HRS. STANDBY			
BOILER	8	8	8
CAMP	8	8	8
T. OGA	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 36 — CUMULATIVE ROTATING HRS.: 177.5 / 172

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD — MUD RECORD

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD			MUD RECORD		
1	BIT 12 1/4	1.50 FT.	BIT NO.	14	15	TIME	0100	0300
1	NB	6.20	SIZE	12 1/4	12 1/4	WEIGHT	88	8.9
1	STB RMR BS OD	3.80 FT.	MFG.	REED	REED	PRESSURE GRADIENT		
1	D.C. ID STAB OD	6.20 FT.	TYPE	YMG	HTTS	VISC.-SEC.	38	38
1	STB RMR OD	2.77 FT.	JETS 1 32"	12 12 13	11 14 14	PV YP	/	/
1	D.C. ID STAB OD	6.20 FT.	SER. NO.	583587	360424	GELS	/	/
1	STB RMR 3 OD	9.13 FT.	DEPTH OUT	3778		WL-CC'S		
1	TRIP	30.65	DEPTH IN	3506	3778	pH		
28	5" DC	208.81	TOTAL FTG.	272		SOLIDS %		
1	C/O SUB	1.00	TOTAL HRS. RUN	17		MUD & CHEMICALS ADDED		
33	STANDS DP	3149.87 FT.	COND. 1 8's T B GAGE	8 8 1/4		TYPE	AMT.	TYPE AMT.
	SINGLES DP	FT.	GPM PD-PSI					
1	KELLY DOWN	15.00 FT.						
1	TOTAL	3778 FT.						
WT. OF STRING		176,000 LBS.						

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD			MUD RECORD		
1	BIT 12 1/4	1.30 FT.	BIT NO.	15		TIME	0	15 1400
1	HBR	6.20	SIZE	12 1/4		WEIGHT	8.7	9.1
1	STB RMR Roll Reb OD	3.80 FT.	MFG.	SEC		PRESSURE GRADIENT	450	450
1	D.C. ID Tab OD	6.20 FT.	TYPE	H77S		VISC.-SEC.	39	41
1	STB RMR Rmel OD	2.77 FT.	JET 1 32"	14 14 14		PV YP	/	/
1	D.C. ID Tab OD	6.20 FT.	SER. NO.	360424		GELS	/	/
1	STB RMR Rock Sub OD	8.13 FT.	DEPTH OUT			WL-CC'S		
1	5" DC	30.65	DEPTH IN	3778		pH		
1	Stab	6.20	TOTAL FTG.	86		SOLIDS %		
20	5" DC	208.81	TOTAL HRS. RUN	4 1/2		MUD & CHEMICALS ADDED		
1	C/O Sub	1.00	COND. 1 8's T B GAGE			TYPE	AMT.	TYPE AMT.
34	STANDS DP	FT.	GPM PD-PSI					
1	SINGLES DP	32.89 FT.						
	KELLY DOWN	40.34 FT.						
	TOTAL	3864 FT.						
WT. OF STRING		182 000 LBS.						

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD			MUD RECORD		
1	12 1/4	1.50 FT.	BIT NO.	15		TIME		
1	HBR	6.20	SIZE	12 1/4		WEIGHT		
1	B Sub	3.80	MFG.	SEC		PRESSURE GRADIENT	450	
1	STB RMR Stab OD	6.20 FT.	TYPE	H77S		VISC.-SEC.		
1	D.C. ID Mon Coll OD	24.77 FT.	JETS 1 32"	14 14 14		PV YP	/	11 14
1	STB RMR Stab OD	6.20 FT.	SER. NO.	360424		GELS	/	4 5 16 16
1	D.C. Sub OD	9.13 FT.	DEPTH OUT	3890		WL-CC'S	6	Core Dr. Gel 4 5 Fltr 14
1	STB RMR Stab OD	6.20 FT.	DEPTH IN	3778		pH	9.5	9.5 9.5 9.5 9.5 9.5 9.5
7	9" DCs	208.81	TOTAL FTG.	112		SOLIDS %	4.5	4.5 4.5 4.5 4.5 4.5 4.5
10	7" DCs	307.31	TOTAL HRS. RUN	6 1/2			1 1/2	1 1/2 1/2 1/2 1/2 1/2 1/2
1	C/O Sub	1.00	COND. 1 8's T B GAGE			MUD & CHEMICALS ADDED		
34	STANDS DP	3243.26 FT.	GPM PD-PSI			TYPE	AMT.	TYPE AMT.
2	SINGLES DP	FT.				Gel	2 sx	
	KELLY DOWN	34.97 FT.				Lignox	1 sx	
	TOTAL	3890.00						
WT. OF STRING		183,000 LBS.						

EVENING TOUR

FOOTAGE — FORMATION — DEVIATION RECORD — TIME LOG

FOOTAGE FROM	FOOTAGE TO	DR'D RM'R CORE C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL S PAR FL COM DC
3720	3778	D		FUEL - 3'6"	120	55	2200	6 3/4	57			
					120	60	2100	6 3/4	57			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0330	3 1/2		DRILL
0330	0630	3		HOIST OUT " LAY DOWN 2 WASHED SINGLES
0630	730	1		MAKE UP BIT " 3 POINT REAMER IN GAUGE "
730	800	1/2		RUNNING IN

DRILLER: D Hawkes

FOOTAGE FROM	FOOTAGE TO	DR'D RM'R CORE C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL S PAR FL COM DC
3778	3864	D			120	20	1800	6 3/4	58			5

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv + check BOPs
0815	0900	3/4		SLIP 68' DRLG LINE
0900	1100	2		RUN IN
1100	1130	1/2		Wash + Ream 22' to Bottom
1130	1600	4 1/2		DRLG 12 1/4 HOLE

DRILLER

FOOTAGE FROM	FOOTAGE TO	DR'D RM'R CORE C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL S PAR FL COM DC
3864	3890	D			120	50	1850	6 3/4	58			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
3890	7°							

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		RIG SERV.
1615	1815	2		DRLG 12 1/4 HOLE
1815	1915	1		CIRC SAMPLE @ 3890 (Geo. Req.)
1915	2000	3/4		DUMMY TRIP 6 STDS.
2000	2130	1 1/2		CIRC TO COND HOLE + MUD TO LOG.
2130	2200	1/2		DROP DIRECTIONAL SURVEY
2200	2400	2		HOIST BIT # 15. 4 STRAP OUT.

DRILLER: L Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 26

LEASE	WELL NO.	API WELL NUMBER	DATE
CANSWICK	A-1	C]R-C-12	02-19-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Glarstairs	Jim Kerlee

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	1000	18
2	NSCO	850	15

LEGAL LAND DESCRIPTION 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	MM	68 S55	24	1023	13	1023

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF 900 — PRESENT LENGTH 660

TON MI. OR TRIPS SINCE LAST CUT ~~327~~ 780

CUMULATIVE TON MI. OR TRIPS ~~357~~

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL		17 1/4	6 3/4
3. REAMING	1	1	
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2		
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			1
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.	5		
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
CAMP	8	8	8
BOILER	8	4	8
TIOGA	8	4	8
TOTAL DAY WORK	8	8	8
NO. OF DAYS FROM SPUD	2 ~~5~~		
CUMULATIVE ROTATING HRS.	~~162~~ 167 1/2		
TOTAL MUD COST			

NO. 1 DRILLING ASSEMBLY (At end of tour)

1	BIT	1.50	FT.
1	NBR	6.20	
1	STB RMR BC OD	3.80	FT.
1	D.C. ID SLAB OD	6.20	FT.
1	STB RMR 9" OD	24.77	FT.
1	D.C. ID NB OD	6.20	FT.
1	STB RMR SHOCK OD	9.13	FT.
1	9" DC	30.65	
1	STAB	6.20	
1	9" DC	30.65	
6	STANDS DP	178.16	FT.
10	SINGLES DP	307.31	FT.
1	C/O	1.00	
19	KELLY DOWN	28.77	FT.
	TOTAL	22 DAY 3506.05	FT.
	WT. OF STRING	170,000	LBS.

BIT RECORD

BIT NO.	14
SIZE	12 1/4
MFG.	REED
TYPE	YMG
JETS 1 32"	13 13 14
SER. NO.	583587
DEPTH OUT	
DEPTH IN	3506
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 B's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.			
PV YP	/	/	/
GELS.			
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO. 1 DRILLING ASSEMBLY (At end of tour)

1	BIT	6.20	FT.
1	Bit Sub	3.80	
1	STB RMR Stabbed	6.20	FT.
1	D.C. ID mod OD	24.77	FT.
1	STB RMR Stabbed	6.20	FT.
1	D.C. Shocked OD	9.13	FT.
1	STB RMR DC OD	30.65	FT.
1	Stab	6.20	
7	9" DC	208.81	
19	7" DC	307.31	FT.
	STANDS DP	1.00	
32	SINGLES DP	2998.17	FT.
	KELLY DOWN	15.06	FT.
	TOTAL	3625	FT.
	WT. OF STRING	180,000	LBS.

BIT RECORD

BIT NO.	14
SIZE	12 1/4
MFG.	Reed
TYPE	YMG
JET 1 32"	12 13 14
SER. NO.	583587
DEPTH OUT	
DEPTH IN	3506
TOTAL FTG.	119
TOTAL HRS. RUN	6
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT	9.1	10	10
PRESSURE GRADIENT	470	470	470
VISC.-SEC.	40	46	38
PV YP	/	/	/
GELS.	1 6	/	/
WL -CC'S			
pH	9		
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

NO. 1 DRILLING ASSEMBLY (At end of tour)

1	BIT 12 1/4	1.50	FT.
1	N. Reamer	6.20	
1	STB RMR B. Sub OD	3.80	FT.
1	D.C. ID Stab OD	6.20	FT.
1	STB RMR Monel OD	24.77	FT.
1	D.C. ID Stab OD	6.20	FT.
1	STB RMR Shock Sub	9.13	FT.
1	9" DC	30.65	
1	STAB	6.20	
7	9" DC	208.81	
19	7" DC	307.31	
1	Bo Sub	1.00	
33	STANDS DP	3089.35	FT.
	SINGLES DP		FT.
	KELLY DOWN	18.88	FT.
	TOTAL	3720.00	FT.
	WT. OF STRING	174,000	LBS.

BIT RECORD

BIT NO.	14
SIZE	12 1/4
MFG.	Reed
TYPE	YMG
JETS 1 32"	12 12 13
SER. NO.	583587
DEPTH OUT	
DEPTH IN	3506
TOTAL FTG.	214
TOTAL HRS. RUN	13 1/2
COND. 1 8's T B GAGE	1/1
GPM. PD-PSI	

MUD RECORD

TIME	1700	/	/
WEIGHT	9.0	8.9	8.9
PRESSURE GRADIENT	470	460	460
VISC.-SEC.	40	/	40
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S	1 CAN	O	6 gpm
pH	6	8	7 gpm
SOLIDS %	Lime 12.6	11.5	To Limit
	10 bbls	Tanks	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
3506				4' 11" Fuel	90	20	2250	6 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001				CHANGE BLOCKS IN 3 POINT REAMER MAKE UP BIT & CHANGE STAB AROUND IN STRING,
	0500	5		PICK UP SHOCK UNPLUG SAME
0500	0700	2		RUN IN
0700	0800	1		REAM 60'

DRILLER D Hamilton

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
3506	3625	D			120	50	2200	6 3/4	57			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Ream To Bottom = 0'
0900	0915	1/4		Drlg 12 1/4 Hole
0915	0930	1/4		Rig Ser + Check Gaps
0930	1600	6 1/2		Drlg 12 1/4 Hole

DRILLER

DAY TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
3625	3720	D			120	50/55	2240	6 3/4	57			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
3698	7 1/4	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2000	4		Drlg 12 1/4" Hole
2000	2015	1/4		Rig Serv
2015	2115	1		Directional Survey
2115	2400	2 3/4		Drlg 12 1/4" Hole

Correction Made To Pipe Tally Diff Less 3.30

DRILLER L Sandquist

EVENING TOUR

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. ~~24~~ 25

LEASE	WELL NO.	API WELL NUMBER	DATE
BRANSWICK	A-1	CTR C-12	02-18-77

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J Carstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Keeler

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D-1000	18
2	NSCO	A 850	15

LEGAL LAND DESCRIPTION

WIRE LINE RECORD — REEL NO. — SIZE 13/4 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF 900 — PRESENT LENGTH 660 — TON MI. OR TRIPS SINCE LAST CUT 333 — CUMULATIVE TON MI. OR TRIPS 333

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	I.M.-M.J.	68 J55	24	1025	KB	1025

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	14	5	3 1/4
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			3 1/2
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG	6 1/4	2 3/4	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1/2		1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			1/2
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Circ Sample			3/4
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
CAMP	8	8	8
BOILER	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 26

CUMULATIVE ROTATING HRS. ~~154~~

TOTAL MUD COST 15 4

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
		~~680~~	
1	STB RMR B.S OD	3.80	FT.
3	D.C. ID STAB OD	18.60	FT.
8	STB RMR OD	239.46	FT.
10	D.C. ID 7" OD	307.31	FT.
1	STB RMR C/O OD	1.00	FT.
30	STANDS DP	2810.35	FT.
	SINGLES DP		FT.
1	KELLY DOWN	29.00	FT.
1	TOTAL	3412	FT.
WT. OF STRING		170,000	LBS.

BIT RECORD

BIT NO.	13
SIZE	12 1/4
MFG.	SEC
TYPE	M44N
JETS 1 32"	13 13 13
SER. NO.	278593
DEPTH OUT	
DEPTH IN	3283
TOTAL FTG.	129
TOTAL HRS. RUN	7 1/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
~~WEIGHT~~			
~~PRESSURE GRADIENT~~			
~~VISC.-SEC.~~			
~~PV-YP~~			
~~GELS~~			
~~WL-CC'S~~			
~~pH~~			
~~SOLIDS %~~			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	E. T Sub	3.80	FT.
1	STB RMR Tab OD	6.20	FT.
1	D.C. ID 7" OD	30.65	FT.
1	STB RMR Tab OD	6.20	FT.
1	D.C. ID 9" OD	30.65	FT.
1	STB RMR Tab OD	6.20	FT.
6	9" DC's	178.16	
10	7" DC	307.31	
1	C/O Sub	1.00	
30	STANDS DP	2872.35	FT.
2	SINGLES DP		FT.
	KELLY DOWN	28.75	FT.
	TOTAL	3473	FT.
WT. OF STRING		170 000	LBS.

BIT RECORD

BIT NO.	12
SIZE	12 1/4
MFG.	SEC
TYPE	M44N
JET 1 32"	13 13 13
SER. NO.	278593
DEPTH OUT	in
DEPTH IN	3283
TOTAL FTG.	190
TOTAL HRS. RUN	12 3/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT	11	11.1	11.0
PRESSURE GRADIENT		4.	4.10
VISC.-SEC.	56	48	48
PV/YP	/	/	/
GELS.	Drilled	/	/
WL-CC'S.	5.0	5.0	
pH & CHLOR.	8.8	13.2	
SOLIDS % OIL		11	11
	MIN. 1.1 701		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	4 SX		
Soda Ash	1 SX		
Black	1 SX		

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	B Sub	3.80	FT.
1	STB RMR ST, bOD	6.20	FT.
1	D.C. ID 9DC OD	30.65	FT.
1	STB RMR Tab OD	6.20	FT.
1	D.C. ID 9DC OD	30.65	FT.
1	STB RMR Tab OD	6.20	FT.
6	9" DCs	178.16	
10	7" DCs	307.31	
1	C/O Sub	1.00	
31	STANDS DP	2903.89	FT.
	SINGLES DP		FT.
	KELLY DOWN	30.44	FT.
	TOTAL	3506.00	FT.
WT. OF STRING		170,000	LBS.

BIT RECORD

BIT NO.	13
SIZE	12 1/4
MFG.	SEC
TYPE	M44N
JETS 1 32"	12 13 13
SER. NO.	298593
DEPTH OUT	3506
DEPTH IN	3283
TOTAL FTG.	223
TOTAL HRS. RUN	15 1/2
COND. 1 8's T B GAGE	6 8 1
GPM. PD-PSI	

MUD RECORD

TIME	9:00		
WEIGHT	9.0		
PRESSURE GRADIENT	4.77		
VISC.-SEC.	42		
PV/YP	/	12 12	/
GELS.	/	2 11	/
WL-CC'S.		13.6	
pH		8.5	
SOLIDS %		5.0	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PART.FL.-P COMP.D-C
3393	3412	D			75	55	1800	6 3/4	~~S.P.M.~~			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3383	6°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0030	1/2		SURVEY @ 3383 6°
0030	0115	3/4		DRILL 12 1/4 HOLE
0115	0730	6 1/4		REPAIR MUD LINES NEW KELLY HOSE & UNION
0730	0800	1/2		DRILL TEAR OUT STAND PIPE FULL 2 STDS UP

DRILLER D Hawks

DAY TOUR

FOOTAGE FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PART.FL.-P COMP.D-C
3412	3473	D			70	50	1800	6 3/4	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0500	0815	3 1/4		Rig Serv & check BOPs
0815	1100	2 3/4		Repair union on Std pipe & Tighten union on Kelly Hose
1100	1600	5		Drlg 12 1/4 Hole

DRILLER A Speers

EVENING TOUR

FOOTAGE FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PART.FL.-P COMP.D-C
3473	3506	D			120	50	1800	6 3/4	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3500	7 7/8°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Serv & Repair Air Line
1615	1930	3 1/4		Drlg 12 1/4" Hole
1930	2015	3/4		Circ Sample
2015	2030	1/4		Survey
2030	2400	3 1/2		Trip Out w/ B.T # 13 & Stand Out.

DRILLER A Sandgren

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 24

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	CJR C-12	02-17-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Hartairs	Jim Kerber

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	DJ 1000	18
2	NSCO	H 850	15"

LEGAL LAND DESCRIPTION 6S – 40 – 135 – 45

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8	M-M	68 J55	24	1025'	KB	1025'

WIRE LINE RECORD — REEL NO.

SIZE 13/8 — NO. LINES 10 — FT. SLIPPED

FT. CUT OFF 900 — PRESENT LENGTH 660

TON MI. OR TRIPS SINCE LAST CUT 333

CUMULATIVE TON MI. OR TRIPS 333

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7 1/2	3/4	6
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS		3/4	1 1/4
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1/2	1/4	
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. REAMER		2	
22. CIRC SAM.		1/2	
23. BREAK CIRC			1/2
COMPLETION & PERF'RTN			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
BOILERS	8	8	8
CAMP	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 23

CUMULATIVE ROTATING HRS. 139

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour) — BIT RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 12 1/4	1.50 FT.	BIT NO.	12
1	NBR	6.20	SIZE	12 1/4
1	STB RMR BS OD	3.80 FT.	MFG.	HW
3	D.C. ID STAB OD	18.60 FT.	TYPE	XDV
	STB RMR OD	FT.	JETS 1 32"	14 14 15
8	D.C. 9" ID OD	239.46 FT.	SER. NO.	FW048
	STB RMR OD	FT.	DEPTH OUT	
1	JARS	9.40	DEPTH IN	2638
10	DC 7	307.31	TOTAL FTG.	597
1	C/O	1.00	TOTAL HRS. RUN	20 3/4
28	STANDS DP	2623.86 FT.	COND. 1/8's T.B. GAGE	
	SINGLES DP	FT.	GPM. PD-PSI	
1	KELLY DOWN	24.00 FT.		
1	TOTAL	3235 FT.		
WT. OF STRING		170,000 LBS.		

MUD RECORD

TIME	0001	0300	0600
WEIGHT	9.0	9.1	9.0
PRESSURE GRADIENT		474	
VISC.-SEC.	35	35	37
PV YP	/	9 / 8	/
GELS.	/	1 / 6	/
WL-CC'S.		12.6	
pH		9.0	
SOLIDS %		5.5	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
gel	1 ton		
lignosulfonate	10 lbs		
caustic soda	200 lbs		

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PART'L-P COM'D-C
3015	3235	D			120	50	1550	6 3/4	59			S
							1550		60			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3120	5 7/8	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0315	3 1/4		DRILL
0315	0345	1/2		SURVEY @ 3120 5 7/8°
0345	0800	4 1/4		DRILL

DRILLER D. Hawkes

DRILLING ASSEMBLY (At end of tour) — BIT RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD		
1	BIT 12 1/4	1.50 FT.	BIT NO.	12	13
1	BIT SUB	3.80	SIZE	12 1/4	12 1/4
	STB RMR Stab OD	6.20 FT.	MFG.	HW	HW44N
	D.C. ID DC 9" OD	306.5 FT.	TYPE	XDV	SEC
	STB RMR Stab OD	6.20 FT.	JET 1 32"	14 14 15	13 13 13
	D.C. ID DC 9" OD	306.5 FT.	SER. NO.	FW048	298593
	STB RMR Stab OD	6.20 FT.	DEPTH OUT	2283	
6	9" DC	178.16	DEPTH IN	2638	3283
10	7" DC	307.31	TOTAL FTG.	645	
1	C/O	1.00	TOTAL HRS. RUN	22 1/2	
28	STANDS DP	2636.71 FT.	COND. 1/8's T.B. GAGE	4 3 1	1
2	SINGLES DP	FT.	GPM. PD-PSI		
	KELLY DOWN	24.00 FT.			
	TOTAL	3283 FT.			
WT. OF STRING		170,000 LBS.			

MUD RECORD

TIME	8	1030	1100
WEIGHT	9.1	9.1	9.1
PRESSURE GRADIENT	470	470	470
VISC.-SEC.	35	36	36
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
gel	1 ton		
lignosulfonate	10 lbs		
caustic soda	200 lbs		

DAY TOUR

FOOTAGE FROM	FOOTAGE TO:	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PART'L-P COM'D-C
3235	3293	D			120	50	1550	6 3/4	57			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3275	6 1/2	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		DRLG 12 1/4 HOLE
0830	0845	1/4		RIG SERV - CHECK BOPS
0845	1000	1 1/4		DRLG 12 1/4 HOLE
1000	1030	1/2		[illegible]
1030	1045	1/4		SURVEY
1045	1400	3 1/4		TRIP W/ BIT
1400	1600	2		CHANGE ROLLERS - PINS ON REAM. IT REAMER [illegible]

DRILLER ? Loeers

DRILLING ASSEMBLY (At end of tour) — BIT RECORD

NO.	DRILLING ASSEMBLY		BIT RECORD	
1	BIT 12 1/4	1.50 FT.	BIT NO.	13
1	B.S.	3.80	SIZE	12 1/4
1	STB RMR STAB OD	6.20 FT.	MFG.	SEC
1	D.C. ID 9" OD	30.65 FT.	TYPE	M44N
1	STB RMR STAB OD	6.20 FT.	JETS 1 32"	13 13 13
1	D.C. ID 9" OD	30.65 FT.	SER. NO.	298593
1	STB RMR STAB OD	6.20 FT.	DEPTH OUT	
6	9" DCs	178.16	DEPTH IN	3283
10	7" DCs	309.31	TOTAL FTG.	110
1	C/O	1.00	TOTAL HRS. RUN	6
29	STANDS DP	2778.91 FT.	COND. 1/8's T.B. GAGE	
2	SINGLES DP	FT.	GPM. PD-PSI	
	KELLY DOWN	42 42 FT.		
	TOTAL	3393.00 FT.		
WT. OF STRING		168,000 LBS.		

MUD RECORD

TIME	2000	2200	2300
WEIGHT	9.1 1/2	9.2	9.2
PRESSURE GRADIENT			
VISC.-SEC.	42	41	42
PV YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
gel	1200 lbs		
lignosulfonate	8 lbs		
caustic soda	1 200 lbs		

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PART'L-P COM'D-C
3283	3393	D			120	55	1950	6 3/4	59			
					75	55	1600	6 3/4	56			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		RIG SERV
1615	1730	1 1/4		RUNNING W/ BIT # 13
1730	1800	1/2		BREAK CIRC & CLEAN TO BTM. 35'
1800	2400	6		DRLG 12 1/4 HOLE

DRILLER L Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 23

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	CIR C-12	02-16-72

OPERATOR	CONTRACTOR	RIG NO.
AMOCO	PETER BAWDEN DRLG	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Glarataire	Jim Kerbies

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	D 1000	18
2	NSCO	H 85-U	16

LEGAL LAND DESCRIPTION

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.		NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-IM	69	T&S	24	1025'	KB	1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/8	10	

FT. CUT OFF 900 — PRESENT LENGTH 660

TON MI. OR TRIPS SINCE LAST CUT 333

CUMULATIVE TON MI. OR TRIPS 333

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	2 1/4	6 1/4	6
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	B		
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG		1/2	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	3/4	1	1 3/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. CLEAN BTM 1			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
BOILERS	8	8	8
CAMP	8	8	8
YLOG	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 22

CUMULATIVE ROTATING HRS. 130 1/2

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	J SUB	2.10	
1	STB RMR NBR OD	6.20	FT.
1	D.C. ID B.T.S. OD	3.80	FT.
1	STB RMR STAB OD	6.20	FT.
1	D.C. ID 9" OD	30.65	FT.
1	STB RMR TAB OD	6.20	FT.
1	9" DC	30.65	
1	STAB	6.20	
1	JARS	9.46	
6	STANDS DP 5" DC	178.16	FT.
10	SINGLES DP	302.31	FT.
1	KELLY DOWN	41.00	FT.
	TOTAL	2661	FT.
WT. OF STRING 160000 LBS.			

BIT RECORD

BIT NO.	11	12
SIZE	12 1/4	12 3/4
MFG.	SEC	HW
TYPE	M4LG	XDV
JETS 1 32"	14 14 15	14 14 15
SER. NO.	412012	FW0418
DEPTH OUT	2638	
DEPTH IN	2145	2638
TOTAL FTG.	493	23
TOTAL HRS. RUN	17	1
COND. 1 8's T B GAGE	6 8 1	
GPM, PD–PSI		

MUD RECORD

TIME	0001	0600
WEIGHT	88 1/2	89
PRESSURE GRADIENT		464.0
VISC.–SEC.	39	38
PV YP	/	/
GELS.	/	/
WL –CC'S.		12.6
pH		9.0
SOLIDS %		5.5

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
	11.1		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	NBR	6.20	
1	STB RMR OD	3.80	FT.
1	D.C. ID 9" OD	30.65	FT.
1	STB RMR STAB OD	6.20	FT.
1	JARS	9.40	
6	9" DCs	178.16	
10	7" DCs	307.31	
25	STANDS DP	2405.24	FT.
2	SINGLES DP		FT.
	KELLY DOWN	23.49	FT.
	TOTAL	3015.40	FT.
WT. OF STRING 165,000 LBS.			

BIT RECORD

BIT NO.	12
SIZE	12 1/4
MFG.	H-W
TYPE	XDV
JETS 1 32"	14 14 15
SER. NO.	FW048
DEPTH OUT	
DEPTH IN	2638
TOTAL FTG.	367
TOTAL HRS. RUN	13 1/4
COND. 1 8's T B GAGE	
GPM, PD–PSI	

MUD RECORD

TIME	1700	2200	1500
WEIGHT	89	91	
PRESSURE GRADIENT	1150	1160	
VISC.–SEC.		38	
PV YP		/	/
GELS		bill	
WL –CC'S			OF 3
pH			
SOLIDS %			0.2

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	34 00 LBS		
Soda Ash	100 LBS		
Bicarb	16 LBS		

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	NBR	6.20	
1	STB RMR OD	3.80	FT.
1	D.C. ID 9" OD	30.65	FT.
1	STB RMR STAB OD	6.20	FT.
1	JARS	9.40	
6	9" DCs	178.16	
10	7" DCs	307.31	
25	STANDS DP	2405.24	FT.
2	SINGLES DP		FT.
	KELLY DOWN	23.49	FT.
	TOTAL	3015.40	FT.
WT. OF STRING 165,000 LBS.			

BIT RECORD

BIT NO.	12
SIZE	12 1/4
MFG.	H-W
TYPE	XDV
JETS 1 32"	14 14 15
SER. NO.	FW048
DEPTH OUT	
DEPTH IN	2638
TOTAL FTG.	367
TOTAL HRS. RUN	13 1/4
COND. 1 8's T B GAGE	
GPM, PD–PSI	

MUD RECORD

TIME	1600	1800	2400
WEIGHT	91	92	90
PRESSURE GRADIENT			
VISC.–SEC.	38	37	
PV YP	/	/	/
GELS			
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
20	1 bag	SAPP	
soda ash	1 gal		
lime	16 lbs		

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL.–P COMB.–C
2606	2661	D		FUEL 29"	120	50	1450	6 3/4	57			
					120	45	1600	6 3/4	57			

DEVIATION RECORD: DEPTH 2620 — DEV. 4 3/8 — DIRECTION X — DEPTH 2630 — DEV. 4 1/2 — DIRECTION \

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0045	3/4		DRILL
0045	0215	1/2		SURVEY
0215	0245	1/2		DRILL
0245	0300	1/4		SURVEY
0300	0400	2		HOIST OUT "TIGHT" 5 STDS
0400	0600	2		RUN IN "LAST 500' SMALL BRIDGES"
0600	0700	1		CLEAN TO BTM 20'
0700	0800	1		DRILL

DRILLER D Hawks

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL.–P COMB.–C
2661	2730	D			120	50	1450	6 3/4	57			S

DEVIATION RECORD: DEPTH 2680 — DEV. 3/4° — DIRECTION X — DEPTH 2810 — DEV. 3 3/4° — DIRECTION X

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0100	1		DRLG 12 1/4 HOLE
0100	0130	1/2		SURVEY
0130	0145	1/4		RIG SER
0145	1300	2 1/4		DRLG 12 1/4 HOLE
1300	1330	1/2		CHANGE BELTS ON AIR COMPRESSOR
1330	1445	1 1/4		DRLG 12 1/4 HOLE
1445	1515	1/2		SURVEY
1515	1600	3/4		DRLG 12 1/4 HOLE

DRILLER A Sowers

FOOTAGE / FORMATION

FROM	TO	DR.–D RM.–R CORE.–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL.–P COMB.–C
2730	3005	D			120	50	1550	6 3/4	59			S
							1600		57			

DEVIATION RECORD: DEPTH 2867 — DEV. 5 7/8° — DIRECTION > — DEPTH 2940 — DEV. 6° — DIRECTION X

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		RIG SERV
1615	1730	1 1/4		DRLG 12 1/4 HOLE
1730	1800	1/2		SURVEY
1800	2200	4		DRLG 12 1/4" HOLE
2200	2315	1 1/4		SURVEY 1 MISS RUN DOUBLE RUN.
2315	2400	3/4		DRLG 12 1/4" HOLE

DRILLER L Sandquist

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.–A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 22

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco C.D.P. C-12	02-15-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Starstairs	Jay Kerbow

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	NS Co	H-850	18"

LEGAL LAND DESCRIPTION 65-40-13S-45.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	A.M.	68 J-55	24	1025	K.B.	1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/8	10	

FT. CUT OFF 9 00 — PRESENT LENGTH 6600

TON MI. OR TRIPS SINCE LAST CUT 333

CUMULATIVE TON MI. OR TRIPS 333

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	7	6 1/2	5 1/2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG		1/4	1/2
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	1	1	3/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.	1/4		
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADM'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 21 1/2

CUMULATIVE ROTATING HRS. 114 3/4

TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	150	FT.
1	Junk Sub	210	
1	STB RMR / B.C. OD	620	FT.
1	D.C. ID / Bit Sub OD	380	FT.
1	STB RMR Stab OD	625	FT.
1	D.C. ID 9" OD	3065	FT.
1	STB RMR Stab OD	625	FT.
1	9" D.C	3065	
1	Stab	620	
	Jars	940	
6	Stands DC	1726	
10	Stands DC	3073	FT.
1	Singles DP	100	FT.
	KELLY DOWN	31 13	FT.
	TOTAL	23400	FT
WT. OF STRING		150 000	LBS.

BIT RECORD

BIT NO.	12
SIZE	12 1/4
MFG.	Sec.
TYPE	M4LC
JETS 1-32"	14-14-15
SER. NO.	
DEPTH OUT	
DEPTH IN	2145
TOTAL FTG.	195
TOTAL HRS. RUN	9 1/4
COND. 1-8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

	0300	0500	0700
TIME			
WEIGHT	8.4	8.4	8.4
PRESSURE GRADIENT			432.4
VISC.-SEC.	31	31	36
PV YP	1 / 1	1 / 1	8 / 8
GELS.	1 / 1	1 / 1	2 / 7
WL -CC'S.			17.6
pH			9.0
SOLIDS %			2.5

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1500	LIG	
Quix 14	100	LBS	
Caustic	2 sx	LBS	

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-ST PAR-FL-P COM-DC
2200	2254	D			120	40	1450	6 3/4	56			S
2254	2317	D			120	30	1450	6 3/4	56			S
2317	2340	D			120	50	1450	6 3/4	56			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
2250	3 1/2°	X	2310	3 3/4°	X			

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0300	3		Drill 12 1/4" Hole
0300	0330	1/2		Survey
0330	0630	3		Drill
0630	0700	1/2		Survey
0700	0800	1		Drill
				28" fuel

DRILLER C. Tegenkamp

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	150	FT.
1	Junk	210	
1	STB RMR NBR OD	6.20	FT.
1	D.C. ID Bit S OD	3.80	FT.
1	STB RMR STAB OD	6.20	FT.
1	D.C. ID 9" OD	3065	FT.
1	STB RMR STAB OD	620	FT.
1	Jars	9.40	
6	9" DC	178.16	
10	9" DC	307.31	
1	C/O	1.00	
20	STANDS DP	1874	FT.
	SINGLES DP		FT.
1	KELLY DOWN	37.00	FT.
1	TOTAL	2500	FT.
WT. OF STRING		152,000	LBS.

BIT RECORD

BIT NO.	11
SIZE	12 1/4
MFG.	SEC
TYPE	M4LC
JET 1/32"	14 14 15
SER. NO.	
DEPTH OUT	
DEPTH IN	2145
TOTAL FTG.	355
TOTAL HRS. RUN	15 3/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

	0800	1100	0200
TIME			
WEIGHT	8.9	8.9	88.5
PRESSURE GRADIENT			
VISC.-SEC.	32	34	37
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
gel	2 sx	Lcm	
lcm	12 lbs		
caustic soda			

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL-ST PAR-FL-P COM-DC
2340	2500	1			120	50	1450	6 3/4	56			S
					130	50	2000	6 3/4	57			S
					120	60	1500	6 3/4	57			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
2370	4 1/8	X	2430	5°	X			

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2	1	Rill
0830	0845	1/4		Rig Serv. & BOPs
0845	1000	1 1/4	1	Rill
1000	1015	1/4		Work On Air Line To No 3 Motor Clutch
1015	1030	1/4	1	Rill
1030	1100	1/2		Survey 2370 4 1/8
1100	1315	2 1/4	1	Rill
1315	1345	1/2		Survey @ 2430 5°
				1345-1600 Drill

DRILLER D. Hewett

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	150	FT.
		210	
	STB RMR OD	620	FT.
	D.C. ID OD	380	FT.
	STB RMR OD	620	FT.
	D.C. ID OD	3065	FT.
	STB RMR OD	620	FT.
		2062	
		940	
		210	
6	STANDS DP	1726	FT.
21	SINGLES DP	1499.82	FT.
	KELLY DOWN	16.81	FT.
	TOTAL	2606.00	FT.
WT. OF STRING		152,000	LBS.

BIT RECORD

BIT NO.	11
SIZE	12 1/4
MFG.	Sec
TYPE	M4L
JETS 1-32"	14 14 15
SER. NO.	
DEPTH OUT	
DEPTH IN	2145
TOTAL FTG.	461
TOTAL HRS. RUN	21 1/4
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT	9.1	9.3	9.3
PRESSURE GRADIENT	460	484	490
VISC.-SEC.			41
PV YP	/	/	/
GELS.	/	/	/
WL -CC'S	6 cmc	12.4	
pH			
SOLIDS %			
	DRILLING 9.1		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	350 sx	LIG	
Bent x	17	LBS	
caustic soda	200	LBS	

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-ST PAR-FL-P COM-DC
2500	2606	D			120	40	1450	6 3/4	57			
					120	30	1450	6 3/4	57			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
2510	4 3/4	X	2606	4 5/8	X			

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Drill 12 1/4 Hole
1615	1630	1/4		Survey
1630	1645	1/4		Rig Ser
1645	1730	3/4		Drill 2 1/4 Hole
1730	1900	1 1/2		Install New Input Chain To Drawworks
1900	2200	3		Drill 12 1/4 Hole
2200	2230	1/2		Survey
2230	2400	1 1/2		Drill 12 1/4 Hole

DRILLER M. Jones

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 21

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco C.D.R C-12	02-14-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Jim Hartstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Bellow

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 EF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1600	18"
2	Nsco	H-850	16

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	N-M	68 J55	24	1025	K.B	1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/8	10	

FT. CUT OFF: | PRESENT LENGTH:

TON MI. OR TRIPS SINCE LAST CUT:

CUMULATIVE TON MI. OR TRIPS:

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			2 1/4
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	3	4 3/4	4 3/4
7. LUBRICATE RIG		1/4	
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			1/2
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING	2		
20. DIR. WORK			
21.	3		
22. THAW LINES		3	
23. Clean out DC			1/2
COMPLETION A. PERF'R'T'N			
B. TDG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Flota	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 20

CUMULATIVE ROTATING HRS.: 45 3/4

TOTAL MUD COST:

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD		
1	BIT Overshot 10 3/8	8.13 FT.	BIT NO.		
1	Sub 6 3/4	1.38	SIZE		
1	STB RMR 8" OD	92 FT.	MFG.		
1	D.C. 8" OD	102 FT.	TYPE		
	STB RMR Jars OD	744 FT.	JETS 1 32"		
1	D.C. 9" OD	144 FT.	SER. NO.		
6	STB RMR 9" DC OD	178.16 FT.	DEPTH OUT		
10	7" D.C.	307.31	DEPTH IN		
1	do	1.00	TOTAL FTG.		
			TOTAL HRS. RUN		
16	STANDS DP	1531.42 FT.	COND. 1/8's T'B GAGE		
1	SINGLES DP	FT.	GPM. PD–PSI		
	KELLY DOWN	FT.			
	TOTAL	FT.			
WT. OF STRING		145 000 LBS.			

MUD RECORD		
TIME		
WEIGHT		
PRESSURE GRADIENT		
VISC.–SEC.		
PV YP	/	/
GELS.	/	/
WL –CC'S.		
pH		
SOLIDS %		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1.00	L.C.S.	
Soda Ash	1		
Sta-Hall	1.00	L.C.S.	

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD		
1	BIT	1.50 FT.	BIT NO.	10	11
1	MB. Reamer	6.20	SIZE	12 1/4	12 1/4
1	STB RMR Bit Sub	3.80 FT.	MFG.	HW	Sec
3	D.C. ID 9" OD	239.46 FT.	TYPE	XIC	M4LG
3	STB RMR OD	18.60 FT.	JET 1 32"	B 13 13 13 13 13	
1	D.C. ID Jars OD	6.52 FT.	SER. NO.	FL710	
10	STB RMR 7" OD	307.31 FT.	DEPTH OUT	2145	
1	C/O	1.00	DEPTH IN	1745	2145
			TOTAL FTG.	400	
			TOTAL HRS. RUN		
16	STANDS DP	1500.06 FT.	COND. 1/8's T'B GAGE	6 4 1	
1	SINGLES DP	31.36 FT.	GPM. PD–PSI		
1	KELLY DOWN	24.14 FT.			
1	TOTAL	2145 FT.			
WT. OF STRING		145,000 LBS.			

MUD RECORD		
TIME		
WEIGHT		
PRESSURE GRADIENT		
VISC.–SEC.		
PV YP	/	/
GELS.	/	/
WL –CC'S.		
pH		
SOLIDS %		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD			
1	BIT 2 3/4	1.50 FT.	BIT NO.	11	11	
1	Junk Sub	2.10	SIZE	12 1/4	1	
1	STB RMR VBR OD	6.20 FT.	MFG.	Sec		
1	D.C. Flex Sub OD	3.80 FT.	TYPE	M4LG		
1	STB RMR Tab OD	6.20 FT.	JETS 1 32"	14 14 15		
1	D.C. ID OD	30.65 FT.	SER. NO.			
1	STB RMR Tab OD	6.20 FT.	DEPTH OUT	in		
1	DC 9"	30.65	DEPTH IN	2145		
1	Tab	6.20	TOTAL FTG.	55		
	Jars	14.16	TOTAL HRS. RUN	2 1/4		
16	STANDS DP 5"	1507.36 FT.	COND. 1/8's T'B GAGE			
1	SINGLES DP 5"	594.41 FT.	GPM. PD–PSI			
	KELLY DOWN	16.22 FT.				
	TOTAL	2200.00 FT.				
WT. OF STRING		150 000 LBS.				

MUD RECORD			
TIME	1800	2100	2300
WEIGHT	8.7	8.7	8.7
PRESSURE GRADIENT	450	450	450
VISC.–SEC.	39	39	39
PV YP	/	/	/
GELS.	/	/	/
WL –CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL–S PARFL–F COMP.–C
2145	2145						900	6 3/4				
				Over Fish			500	6 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0200	2.		Circ & Work over Fish
0200	0500	3		Trip Out slow w/ Fish (Spin chain out)
0500	0800	3		Get welder to cut off broken part along side mandrel, Break down subs & Overshot. Pick up new set of Jars.
				Recover Jars, Broken part was along side mandrel held on friction sold
				Full @ 730 AM 4 Ft. 10 In.

DRILLER: Segundo

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL–S PARFL–F COMP.–C
2145												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv.
0815	0845	1/2		Hoist Out To Bit
0845	0915	1/2		Make Up New Bit #11
0915	~~0945~~			Run in w/ JC & Caliber All Subs
~~0945~~	1115	2		Run in Tag Fish @ 1100 Circ
1115				Thaw Mud Line Between To Pumps & Circ
	1415	3		& Condansation Plug in Kelly Hose. Bit Plugged
1415	1600	1 3/4		Hoist Out "Wet" Pipe

DRILLER: Newbo

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCHL–S PARFL–F COMP.–C
2145	2200	0			120	40	1450	6 3/4	56			5

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
2190	2 1/2°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1800	2		Hoist Plug BIT
1800	1830	1/2		Clean Shake out of Bit Sub & Bit
1830	2115	2 3/4		Run in Bit #11
2115	2300	1 3/4		Drlg 12 1/4 Hole
2300	2330	1/2		Survey in Wire Line
2330	2400	1/2		Drlg 12 1/4 Hole

DRILLER: Speers

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco C.D.R C-12	02-13-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Lawden Drlg.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
5"	19	E	6¾	4½ IF	1	1	Emsco	D-1000	18"
						2	N.S.CO.	H-850	16"

LEGAL LAND DESCRIPTION 65 - 40 - 131 - 45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13⅜	M-M	68 T&S	24	1025	KB	1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE	3/4	6	1¾
6. TRIPS	3	2	3½
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.	1/4		
22.	4		
23.			2¾
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Boilers	8	8	8
Pumps	8	8	8
Tiogh	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD 19

CUMULATIVE ROTATING HRS. 93½

TOTAL MUD COST

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD			
1	BIT 12¼	150 FT.	BIT NO.	TIME			
1	N.B. Ream	620	SIZE	WEIGHT			
1	Sub	380 FT.	MFG.	PRESSURE GRADIENT			
1	D.C. STAB OD	620 FT.	TYPE	VISC.-SEC.			
1	STB RMR 9" DC OD	3065 FT.	JETS 1 32"	PV YP	/	/	/
1	D.C. STAB OD	620 FT.	SER. NO.	GELS.	/	/	/
1	STB RMR 9" DC OD	3065 FT.	DEPTH OUT	WL -CC'S.			
1	STAB 8 1/8	620	DEPTH IN	pH			
1	JARS	890	TOTAL FTG.	SOLIDS %			
6	9" DC	17816	TOTAL HRS. RUN				
10	STANDS DP 7"	30731 FT.	COND. 1'8's T'B' GAGE	MUD & CHEMICALS ADDED			
1	SINGLES DP	100 FT.	GPM. PD-PSI	TYPE	AMT.	TYPE	AMT.
16	STDS + 1 SGL	1331½ FT.		Gel	3600	Lbs	
	KELLY DOWN	2031 FT.		Benex	10	Lbs	
	TOTAL	21451 FT.		Soda Ash	100	Lbs.	
WT. OF STRING		LBS.					

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD			
1	Overshot 10 3/4	4.13 FT.	BIT NO.	TIME	0900	1200	1500
1	Sub 8"	.91	SIZE	WEIGHT	8.8	8.8	8.8
1	STB RMR 8" OD	1.04 FT.	MFG.	PRESSURE GRADIENT			
1	D.C. 10¾ OD	1.40 FT.	TYPE	VISC.-SEC.	37	38	37
1	STB RMR Tools 8" OD	6.51 FT.	JET 1 32"	PV/YP	/	/	/
1	D.C. 7" ID 6 9/16 OD	1.44 FT.	SER. NO.	GELS.	/	/	/
6	STB RMR 9" DC OD	178.16 FT.	DEPTH OUT	WL -CC'S.			
10	D.C. 7"	307.31	DEPTH IN	pH			
1	C/O	1.00	TOTAL FTG.	SOLIDS %			
			TOTAL HRS. RUN				
16	STANDS DP	1531½ FT.	COND. 1'8's T'B' GAGE	MUD & CHEMICALS ADDED			
1	SINGLES DP	FT.	GPM. PD-PSI	TYPE	AMT.	TYPE	AMT.
	KELLY DOWN	FT.		Gel	3000 lbs		
	TOTAL	FT.		Benex	19 lbs		
WT. OF STRING		LBS.		Soda Ash	200 lbs		

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD	MUD RECORD			
1	Overshot Bit 10 3/4	8.13 FT.	BIT NO.	TIME	1800	2100	2300
1	Sub 6¾	1.38	SIZE	WEIGHT	8.7	8.7	8.7
1	STB RMR 8 5/8 OD	.92 FT.	MFG.	PRESSURE GRADIENT	450	450	450
1	D.C. ID 8 5/8 OD	1.02 FT.	TYPE	VISC.-SEC.	45	45	45
	STB RMR Stars OD	7.44 FT.	JETS 1 32"	PV/YP	/	/	/
1	D.C. ID 7" OD	1.44 FT.	SER. NO.	GELS.	/	/	/
6	STB RMR 9" DC OD	178.16 FT.	DEPTH OUT	WL -CC'S.			
10	7" DC	307.31	DEPTH IN	pH			
1	C/O	1.00.0	TOTAL FTG.	SOLIDS %			
			TOTAL HRS. RUN				
16	STANDS DP	FT.	COND. 1'8's T'B' GAGE	MUD & CHEMICALS ADDED			
1	SINGLES DP	1531 42 FT.	GPM. PD-PSI	TYPE	AMT.	TYPE	AMT.
	KELLY DOWN	FT.		Gel	1700 Lbs		
	TOTAL	FT.		Sodium Ash	100 LBS		
WT. OF STRING		LBS.		Benex	6 LBS		

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCI. PAR. FL. COM. DC
2145	2145						200	6¾				
				OVER FISH			500	6¾				

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0050	½		TRIP OUT
0030	0430	4		DRESS UP 10¾ OVERSHOT W/ 8" BASKET GRAPPLE & PICKUP
				TO RUN IN TO FISH
0430	0700	2½		MAKE UP OVERSHOT & SUBS. TRIP IN
0700	0715	¼		Blow Kelly
0715	0800	¾		CIRC & WORK OVER FISH
				FUEL 2" 10" @ 1:30 A.M.

DRILLER W. Pearce

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCI. PAR. FL. COM. DC
2145							700	6½				
							650					

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		CIRC. ABOVE FISH
0900	1000	1		HOIST OUT
1000	1100	1		RUN BACK IN TO CIR. ABOVE FISH W.O
1100				TOOLS & FISHERMAN
	1600	5		CIRC. ABOVE FISH & WORK PIPE

DRILLER D Hawks

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCI. PAR. FL. COM. DC
2145												

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1730	1½		CIRC + WORK PIPE ABOVE FISH
1730	1930	2		HOIST PIPE
1930	2115	1¾		WAIT ON FISHERMAN + TOOLS
2115	2215	1		MAKE UP OVERSHOT WITH 2' EXTENSIONS
2215	2345	1½		RUN IN
2345	2400	¼		CIRC above Fish

DRILLER A Spears

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Brunswick	A-1	Amoco C.D.R. C-12	02-12-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
	Jim Kerbes

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	D-1000	Emsco	18"
2	H-850	NJCo	16"

LEGAL LAND DESCRIPTION

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	A.M.	68 BTCS	24	1025 KB		1025

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIP:

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	5	3	3 1/4
3	REAMING			
4	CORING			
5	~~CONDITION MUD~~ & CIRCULATE	1/2		
6	TRIPS			1/4
7	LUBRICATE RIG		1/4	1/4
8	REPAIR RIG	1/4	3/4	3 1/2
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY	1 1/2	1 1/4	1/4
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
	Tight Hole	3/4		
22				
23				
	A. PERF'R'T'N			
	B. TBG TRIPS			
COMPLETION	C. TREATING			
	SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
	TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	4 1/2	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.		3 1/2	
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 4 5/6

CUMULATIVE ROTATING HRS.

TOTAL MUD COST: N/A

MORNING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 12 1/4	150	FT.
1	Bit Sub	380	
	STB RMR OD		FT.
8	D.C. ID 9" OD	239 4/6	FT.
3	STB RMR OD	186	FT.
10	2 2/8 7" OD	307 31	FT.
	STB RMR OD		FT.
1	A.B.S.	620	
1	Jars	890	
1	C/O Sub	100	
14	STANDS DP	1340 75	FT.
1	SINGLES DP		FT.
	KELLY DOWN	34 50	FT.
	TOTAL	19620	FT.
WT. OF STRING		126 000	LBS.

BIT RECORD	
BIT NO.	10
SIZE	12 1/4
MFG.	H.W.
TYPE	X 16
JETS 1 32"	13 13 13
SER. NO.	FL 710
DEPTH OUT	
DEPTH IN	1745
TOTAL FTG.	217
TOTAL HRS. RUN	6 3/4
COND. 1/8's T.B. GAGE	
GPM/ PD–PSI	

MUD RECORD			
TIME	01:00	03:00	07:00
WEIGHT	9	9	9
PRESSURE GRADIENT			
VISC.–SEC.	34	35	36
~~PV/YP~~	/	/	/
~~GELS~~	/	/	/
~~WL–CC'S~~			
~~pH~~			
~~SOLIDS %~~			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	32 00 #	LBS.	
Benex	12 #	LBS.	

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 12 1/4	150	FT.
	Bit Sub	380	
8	STB RMR OD	239.46	FT.
3	D.C. ID OD	18.60	FT.
10	STB RMR 7 OD	307.31	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	NBR	6.20	
1	Jars	8.90	
1	C/O	1.00	
15	STANDS DP	1403.51	FT.
2	SINGLES DP	6.31	FT.
1	KELLY DOWN	9.45	FT.
1	TOTAL	20.62	FT.
WT. OF STRING		150,000	LBS.

BIT RECORD	
BIT NO.	10
SIZE	12 1/4
MFG.	Hw
TYPE	X 16
JETS 1 32"	13 13 13
SER. NO.	FL 710
DEPTH OUT	1745
DEPTH IN	1745
TOTAL FTG.	317
TOTAL HRS. RUN	9 3/4
COND. 1/8's T.B. GAGE	
GPM/ PD–PSI	

MUD RECORD			
TIME	08:00	11:00	17:00
WEIGHT	9.2	9.1	9.0
PRESSURE GRADIENT			
VISC.–SEC.	35	34	38
PV/YP	/	/	/
GELS	/	/	/
WL –CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	25 Tons	Sawdust	
Benex	20 lbs.	UF- 13.3	36 GPM
Soda Ash	100 lbs.	DF- 9.1	

NO.	DRILLING ASSEMBLY (At end of tour)		
1	BIT 12 1/4	150	FT.
	Bit Sub	380	
	STB RMR OD		FT.
8	D.C. ID 9 OD	239.46	FT.
3	STB RMR OD	186	FT.
10	D.C. ID 7 OD	307.31	FT.
	STB RMR OD		FT.
1	NBR	6.20	
1	Jars	8.90	
1	C/O	1.00	
16	STANDS DP	1531.42	FT.
1	SINGLES DP		FT.
	KELLY DOWN	26.81	FT.
	TOTAL	2145	FT.
WT. OF STRING		135 000	LBS.

BIT RECORD	
BIT NO.	10
SIZE	12 1/4
MFG.	Hw
TYPE	X 16
JETS 1 32"	13 13 13
SER. NO.	FL 710
DEPTH OUT	2145
DEPTH IN	1745
TOTAL FTG.	400
TOTAL HRS. RUN	15
COND. 1 8's T/B/ GAGE	
GPM/ PD–PSI	

MUD RECORD			
TIME	18:00	2000	22:00
WEIGHT	9.1	9.1	9.1
PRESSURE GRADIENT	470	470	470
VISC.–SEC.	35	35	35
PV/YP	10/10	10/10	10/10
GELS.	1/7	1/7	1/7
WL–CC'S	6 cond		
pH	UF- 12.8		1/2 GPM
SOLIDS %	DF- 9.0t		
	SINGLE COIL		
	UF- 12.9		2 1/2 GPM
	DF- 9.0		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1500 LBS		
Benex	8 LBS		
Soda Ash	100 LBS		

MORNING TOUR

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PARE–P COMP–C
1800	1962	D			125	20	1600	6 3/4	52			
					160	20	1600	6 3/4	52			
					150	30	1600	6 3/4	52			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	1800	2 1/4°	X	1835	1/8°	X	1900	1 1/2°	

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
~~0000~~	~~0015~~			
0015	0845	1/4		Drill 12 1/4" Hole
0845	0100	1/2		Survey
0100	0145	1/4		Work Tight Hole on Flow Line & Hole Fill
0145	0215	3/4		Work Tight Hole
0215	0330	1/2		Circ. Work Pipe 0600 - 0630 1/2 Survey
0330	0400	1 1/4		Drill 0630 - 0800 1 1/2 Drill
0400	0600	1/2		Survey
0600		2		Drill

DRILLER: Rauenhorst

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PARE–P COMP–C
1962	2062	DR			150	50	1600	6 3/4	52			
					130	25	1600	6 3/4	52			
					150	60	1950	6 3/4	55			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	1960	2 1/4	X	1990	2 1/2	X	2050	30	

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Drill
0815	0845	1/2		Survey & Rig Ser & Bop.
0845	0930	3/4		Drill
0930	1015	3/4		Repair Mud Line in Sub.
015	1045	1/2		Drill
1045	1115	1/2		Survey @ 1990 2 1/4° Azimuth 12 SE
1115	1130	1/4		Drill
1130	1415	2 3/4		Repair Mud Line Washed Out
1415	1530			Drill
1530	1600			Survey

DRILLER: D. Hawks

EVENING TOUR

FOOTAGE FROM	TO	DR–D RM–R CORE–C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PARE–P COMP–C
2062	2145	D			120	30	1950	6 3/4	56			S

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	2120	3 1/4°	X						

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Rig Ser + Check Bops
1615	1930	3	1/4 A	Drilling 12 1/4 Hole
1930	1745	1/4		Survey
1745	2145	2		Drill 12 1/4 Hole
2145	2400	2	1/4	Trip in Bit

DRILLER: A. Sparks

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco C.D.R. C-12	02-11-72
OPERATOR	**CONTRACTOR**		**RIG NO.**
Amoco	Peter Bandeen Drlg. Serv.		31
SIGNATURE OF OPERATOR'S REPRESENTATIVE	**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**		
	Jim Kerbo		

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D1000	18
2	Nat	H-850	15

LEGAL LAND DESCRIPTION 65 – 40 – 131 – 45

WIRE LINE RECORD — REEL NO. — SIZE — NO. LINES — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M.M.	68 K55	24	1025 K.B		1025

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			1 3/4
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1	2 1/4	1/4
7. LUBRICATE RIG		1/4	
8. REPAIR RIG		3/4	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. ~~SQUEEZE CEMENT~~	2		
19. FISHING			
20. DIR. WORK			
21.	1/2	13/4	
22.	4	17/4	
23.	1/2	3/4	
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	6 1/4	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.		1 3/4	
HRS. STANDBY			
Bailers	8	8	8
Camp	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 17

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	Bit Sub	380	
	STB RMR OD		FT.
8	D.C. 9" ID OD	23946	FT.
3	STB RMR OD	1860	FT.
10	D.C. ID OD	30731	FT.
	STB RMR OD		FT.
NB		620	
1		890	
1	Cio Sub	100	
12	STANDS DP	115355	FT.
1	SINGLES DP		FT.
	KELLY DOWN	500	FT.
	TOTAL	174532	FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	10
SIZE	12 1/4
MFG.	HW
TYPE	X1G
JETS 1 32"	14 14 15
SER. NO.	FL710
DEPTH OUT	
DEPTH IN	1745
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM/ PD–PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

HORNING TOUR

FOOTAGE

FROM	TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL–P COM'D–C
1745	1745											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0200	2		Dig mouse hole
0200	0230	1/2		Lay down monel collar. Bring up Bit Reamer
				and Stabilizers
0230				Make up Bit & Near Bit Reamer, Stab.
	0630	4		1-9" D.C. Stab. Collar. Stab. Jars
0630	0730	1		Run in 9" DC's
0730	0800	1/2		Measure & Caliper 10-7" Dr. Collars
				28" Rub @ 7.00 A.M.

DAY TOUR

FOOTAGE

FROM	TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL–P COM'D–C
1745												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		Rig Serv.
0815	1000	1 3/4		Pick Up 7" DC
1000	1145	1 3/4		Work On Gear Shifter On Drawworks
1145	1230	3/4		Run Pipe In "Tight" Work Pipe Free
1230	1315	3/4		Thaw Mud Line Between No.1 No.2 Pumps
1315	1430	1 1/4		Try To Break C.I.D. Bit Plugged
1430	1600	1 1/2		Hoist "Wet"

DRILLER D. Hawko

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	120	FT.
1	B.T. Sub	380	
~~1~~	STB RMR OD		FT.
8	D.C. 9 ID OD	23946	FT.
3	STB RMR OD	1860	FT.
10	D.C. 7 OD	30731	FT.
	STB RMR OD		FT.
	NB.S.	620	
1		890	
1	Jars	100	
1	C/o Sub	100	
2	STANDS DP		FT.
2	SINGLES DP	1855 70	FT.
	KELLY DOWN	1854	FT.
	TOTAL	1800	FT.
WT. OF STRING		75 000	LBS.

BIT RECORD

BIT NO.	10
SIZE	12 1/4
MFG.	HW
TYPE	X1G
JETS 1 32"	13 13 13
SER. NO.	FL710
DEPTH OUT	1A
DEPTH IN	1745
TOTAL FTG.	
TOTAL HRS. RUN	1 3/4
COND. 1 8's T B GAGE	
GPM/ PD–PSI	

MUD RECORD

TIME	22:00
WEIGHT	4.0
PRESSURE GRADIENT	
VISC.–SEC.	32
PV YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1200 LBS		
Soda ash	300 LBS		
Penex	8 LBS		

EVENING TOUR

FOOTAGE

FROM	TO	DR..D RM–R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.–S PARL–P COM'D–C
1745	1800	0			125	25	1600	6 3/4	52			5

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1720	1 1/2		Hoist Plugged Bit
1730	2215	4 3/4		Run in Drill 420' To Bottom
2215	2400	1 3/4		Drilling 12 1/4 Hole

DRILLER A. Lacora

Form 3T5

APPROVED

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A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco C.D.P. C-12	02 10-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg.	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Jim Kerbo	

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	NS Co.	H-850	15"

LEGAL LAND DESCRIPTION 65 — 40 — 131 — 45

WIRE LINE RECORD — REEL NO. — SIZE — NO. LINES — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	A-M	68 K55	24	1025 KB		1025 KB

TIME DISTRIBUTION — HOURS

CODE NO. — OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 3/4	6 1/4	2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			4 1/2
7. LUBRICATE RIG			1/4
8. REPAIR RIG	1/2	1 1/4	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	2	1 3/4	1/2
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK	-		
21. Dig Mouse Hole			3/4
22.			
23.			
COMPLETION: A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.F.	16	8	8
HRS. W/OPR. D.P.			
HRS. WO/D.P.	1/4		
HRS. STANDBY			
Soltens	8	8	8
Cadle	8	8	8
Tioga	8	8	8
TOTAL DAY WORK			
NO. OF DAYS FROM SPUD			
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	Bit Sub	2.80	
1	STB RMR Monel OD	24.77	FT.
8	D.C. ID 9" OD	239.46	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
11	STANDS DP	1029.11	FT.
	SINGLES DP		FT.
	KELLY DOWN	40.00	FT.
	TOTAL	1338.64	FT.
WT. OF STRING		112000	LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X1G
JETS 1 32"	14 14 15
SER. NO.	H8169
DEPTH OUT	in
DEPTH IN	1025
TOTAL FTG.	313
TOTAL HRS. RUN	1 1/4
COND. 1/8's T/B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.	28		
PV/YP			
GELS			
WL-CCS			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1200 LBS		
Lignite	24 LBS		
Lignite	300 LBS		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1		3.90	
	STB RMR OD	24.77	FT.
8	D.C. ID 9" OD	239.46	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
14	STANDS DP	1309.63	
2	SINGLES DP	62.76	
	KELLY DOWN	32.00	FT.
	TOTAL	1673	FT.
WT. OF STRING		115,000	LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X1G
JET 1 32"	14 15 15
SER. NO.	HB169
DEPTH OUT	
DEPTH IN	1025
TOTAL FTG.	648
TOTAL HRS. RUN	13 1/4
COND. 1/8's T/B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	8:00	11:00	5:00
WEIGHT	9.0	8.7	8.8
PRESSURE GRADIENT			
VISC.-SEC.	36	37	37
PV/YP			
GELS			
WL-CCS			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	2800 LBS		
Lignite	18 LBS		
Lignite	100 LBS		
soda ash	100 LBS		

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT, 12 1/4	1.50	FT.
1	Bit Sub	3.80	
1	STB RMR Monel OD	24.77	FT.
8	D.C. ID 9 OD	239.46	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
15	STANDS DP	1466.70	FT.
2	SINGLES DP		FT.
	KELLY DOWN	8.77	FT.
	TOTAL	1745	FT.
WT. OF STRING		115000	LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X 1G
JETS 1 32"	14 15 15
SER. NO.	HB169
DEPTH OUT	1745
DEPTH IN	1025
TOTAL FTG.	720
TOTAL HRS. RUN	15 1/4
COND. 1 8's T/B GAGE	4 3 1
GPM. PD-PSI	

MUD RECORD

TIME	18:00		
WEIGHT	9.0		
PRESSURE GRADIENT			
VISC.-SEC.			
PV/YP	5 10		
GELS			
WL-CCS			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	100 LBS		
Lignite	10 LBS		
Soda Ash	10 LBS		

EVENING TOUR

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
1056	1338				125	35	1200	6 3/4	58			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
1050	1 3/4°	X	1115	1°	X	1175	3/4°	X
						1275	1°	NOZE

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Survey
0830	0845	3/4		Drill 12 1/4" Hole
0845	0915	1/2		Survey.
0915	0945	1 1/2		Drill
0945	0515	1/2		Survey.
0515	0630	1 1/4		Drill
0630	0645	1/4		Repair Air Line on Master
				3' 9" Fuel (a) 7:30 A.M.
0645	0715	1/2		Survey
0715	0800	3/4		Drill

DRILLER

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
1338	1673	DR.			125	35	1200 1200	6 3/4	46 44			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
[illegible]			1390	[illegible]	X	1490	1 1/2	N25W
						1610	1 1/2°	

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Drill 12 1/4 Hole
0900	0915	1/4		Survey @ 1390
0915	0930	1/4		Rig Serv. & BOP
0930	1130	2		Drill 12 1/4
1130	1215	3/4		Survey @ 1490 1 1/2°) Dir. Survey 1 1/2°
1215	1430	2 1/4		Drill
1430	1500	1/2		Survey @ 1610 1 1/2°
1500	1600	1		Drill 12 1/4 Hole

DRILLER D Newko

FOOTAGE / FORMATION (SHOW CORE RECOVERY)

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
1673	1745	D			125	35	1800	6 3/4	57			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
1700	2°	N 02 W	1730	2°	X			

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1645	3/4		Drill 12 1/4 Hole
1645	1700	1/4		Survey
1700	1715	1/4		R.S. Ser
1715	1830	1 1/4		Drlg 12 1/4 Hole
1830	1845	1/4		Survey
1845	2315	4 1/2		Trip f/ Bit Blow Kelly Hole very Tight
2315	2400	3/4		Rig up To Dig mouse Hole

DRILLER [illegible]

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	AMOCO CDR C-12	020972
OPERATOR		**CONTRACTOR**	**RIG NO.**
AMOCO		PETER BAWDEN	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		J. Kerber	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
5"	19.6	E	6 3/8	4 1/2 IF	1	1	EMSCO	D1000	18"
							National	H-850	15"

LEGAL LAND DESCRIPTION: AMOCO CDR A-1 CRANSWICK

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	N-M	68 K55	24 jts	1025 KB	1025 KB	1025 KB

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SPOOLED

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL			11 1/4
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE	1/4	1/4	
6	TRIPS	7 1/2	1	
7	LUBRICATE RIG			
8	REPAIR RIG		2	
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.		1/4	1/4
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	Pick up MC	1/2		
22	W O			1/4
23	Slip			1/4
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
BILL A	8	8	8
CA "	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	Bit Sub	3.80	
1	STB RMR OD	12.75	FT.
2	D.C. ID 11 OD	59.04	FT.
	STB RMR OD		FT.
9	D.C. ID 9" OD	768.07	FT.
	STB RMR OD		FT.
3	C/O SUB	3.52	
1	JAR	8.92	
5	STANDS DP	469.86	FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL	822.66	FT.
	WT. OF STRING		LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X16
JETS 1 32"	14 15 15
SER. NO.	H8169
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1-8 T B GAGE	
GPM PD PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV/YP				
GELS				
WL -CC'S				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT	1.50	FT.
	Bit Sub	3.80	
1	STB RMR OD	12.75	FT.
2	D.C. ID 9 OD	59.04 2-39.46	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
6	STANDS DP	563.40	FT.
2	SINGLES DP	62.38	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	883.29	FT.
	WT. OF STRING	108,000	LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X16
JET 1 32"	14 15 15
SER. NO.	H8169
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1-8 T B GAGE	
GPM PD PSI	

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV/YP				
GELS				
WL -CC'S				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	Bit Sub	3.80	
1	STB RMR Monel	14.11	FT.
6	D.C. ID 9 OD	239.46	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
6	STANDS DP	563.40	FT.
2	SINGLES DP	62.38	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	1056	FT.
	WT. OF STRING	110,000	LBS.

BIT RECORD

BIT NO.	9
SIZE	12 1/4
MFG.	HW
TYPE	X16
JETS 1 32"	14 15 15
SER. NO.	H8169
DEPTH OUT	—
DEPTH IN	1025
TOTAL FTG.	31
TOTAL HRS. RUN	1 1/4
COND. 1-8 T B GAGE	R W I
GPM PD PSI	—

MUD RECORD

TIME				
WEIGHT				
PRESSURE GRADIENT				
VISC.-SEC.				
PV/YP				
GELS				
WL -CC'S				
pH				
SOLIDS %				

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
LIGNITE	200 LBS		
GEL	300 LBS		
DEXT	6 LBS		

EVENING TOUR

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL.-P COM.DC-C
1025												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
00 01	0100	1		RIG UP [illegible]
0100	0130	1/2		[illegible]
0130	0800	6 1/2		[illegible]
				(MIX [illegible])
				Flushing over Top. Raising Elevators
				FIELD 0730 6 0

DRILLER [illegible]

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL.-P COM.DC-C
1025												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0815	1/4		RIG SERV
0815	0915	1		CIRC ON [illegible]
0915	1415	5		[illegible]
				RIG UP [illegible]
1415	1500	3/4		CIRC HEAVY [illegible] FLOW [illegible]
1500	1600	1		COOH ON [illegible]

DRILLER D NEWSOM

FOOTAGE

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.EL.-P COM.DC-C
1025	1056	7			120	20	1100	6 3/4	56			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1700	1700	3		[illegible] OF FRONT CUSH.
1700	2145	2 3/4		TEST CSG. 1500 LBS HELD
				[illegible]
				[illegible]
2145	2245	1		[illegible]
2245	2400	1/4		DRILL 13 1/2 HOLE

DRILLER H SIERS

Form 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco CDR C-12	02-08-7
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
		Chris Kinder	

D.P. SIZE	WT. PT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5#	E	6 3/4"	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Nsco	H-850	15

LEGAL LAND DESCRIPTION

WIRE LINE RECORD REEL NO.

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
	13 3/8	M-M.	68 K55	24 Jts	1025		1025 KB

WIRE LINE RECORD: SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1.	RIG UP AND TEAR DOWN			
2.	DRILL ACTUAL			
3.	REAMING			
4.	CORING			
5.	CONDITION MUD & CIRCULATE			
6.	TRIPS			
7.	LUBRICATE RIG			
8.	REPAIR RIG			1
9.	CUT OFF DRILLING LINE			
10.	DEVIATION SURVEY			
11.	WIRE LINE LOGS			
12.	RUN CASING & CEMENT			
13.	WAIT ON CEMENT			
14.	NIPPLE UP B.O.P.	8	8	
15.	TEST B.O.P.		6	3/4
16.	DRILL STEM TEST			
17.	PLUG BACK			
18.	SQUEEZE CEMENT			
19.	FISHING			
20.	DIR. WORK			
21.	INSTALL WEAR BUSH		2	
22.	THAW KELLY HOSE		4	
23.	RECAP DCs		14	
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.	8	8	8
HRS. STANDBY			
BOILER	8	8	8
CAMP	8	8	8
TIOGA	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES	DP		FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES	DP		FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

BIT			FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
D.C. ID	OD		FT.
STB RMR	OD		FT.
STANDS DP			FT.
SINGLES	DP		FT.
KELLY DOWN			FT.
TOTAL			FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1-32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T/B GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV/YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PAR-PL COM-C
1025												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0800	8		HEAD UP BOPE PREPARE TO PRESS TEST PRESS UP ACCUM. BLIND RAMS, PIPE RAMS & HYDRIL CLOSING O.K. INSTALLED BLIND RAMS ON BTM. OF SHAFFER, AND 5" PIPE RAMS ABOVE FUEL @ 800 on 36"

DRILLER L. Sanders

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S. P. M.	METHOD RUN SGL-S PAR-PL COM-C
1025	1025											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1000	2		HEADING UP
1000	1200	2		PRESSURE UP ON BLIND & PIPE RAMS REMAIN LEAKS
1200	1400	2	WORK ON	PRESS TEST PIPE RAMS - 3000 LBS PSI BLED TO
ACCUM	VALVE	CHANGE		PRESS TEST SUPER CHOKE - 3000 LBS PSI OK
HOSE	ON PIPE	RAMS		PRESS TEST BLIND RAMS - 3000 LBS PSI O.K.
1400	1600	2	TIGHTEN	PRESS TEST HYDRIL 3000 LBS PSI OK ON
NEW	O RING	IN		PRESS TEST MANIFOLD 3000 LBS PSI OK ON
BLIND	RAM	COVER.		PRESS TEST ADJUSTABLE CHOKE 3000 PSI

DRILLER Segerlund

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PAR-PL COM-C
1025												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1700	1		WORK ON TUMMIE
1700	1755	1/4		PRESS TEST PIPE RAMS TO 3000 PSI 15 MIN.
1755	1730	1/4		PRESS TEST HYDRIL 3000 PSI 15 MIN HELD
1730	1745	1/4		PRESS TEST MANIFOLD 3000 PSI 15 MIN HELD
1745	1945	2		INSTALL WEAR BUSHING IN CSG. BOWL
1945	2245	2		THAW KELLY @ GROUND LEVEL - BLOW 12.5
2245	2345	1		SLICE FLOOR & TOOLS
2345	2400	1/4		ROLL DC OVER TO PICK UP

DRILLER D. Hawks

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco CDR C-12	2-7-72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drlg	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
T. L. Sulk		Jim Parker	

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5#	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Nisco	H-850	15

LEGAL LAND DESCRIPTION

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8	M-M	68 K55	24 Jts	1025		1025 KB.

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8"	10	

FT. CUT OFF PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.	8	8	8
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.	8	8	8
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Toga	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 13

CUMULATIVE ROTATING HRS.

TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

BIT		FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
D.C. ID	OD	FT.
STB RMR	OD	FT.
STANDS DP		FT.
SINGLES DP		FT.
KELLY DOWN		FT.
TOTAL		FT.
WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS.	
WL -CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

MORNING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR FL-F COM'D-C
1025												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0800	8		Weld Csg. Bowl On & Press Test Between Welds. OKEY Pick Up Flanged Spool. Fill Mud Tanks w/ Water & Work On Hyd. Lines

Fuel @ 8:00 am 51"

DRILLER L. Sanlaurent

MORNING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR FL-F COM'D-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1600	8		Heading up B.O.P.

KB To 2" Outlet on 13 3/8 Bowl = 21.80

DRILLER T. Segundo

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PAR FL-F COM'D-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400			Hand Up BOP's

DRILLER D. Hamilton

FORM 3T5 APPROVED APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	Amoco CDR C-12	02-06-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg.	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [signature]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [signature]

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.6	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18"
2	N.S. Co	H-850	15"

LEGAL LAND DESCRIPTION: Amoco CDR A-1 Cranswick #12

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT
13 3/8	MM	68 K55	24	1025	21.8	1025 KB
				KB		

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
13/16	10	

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1.	RIG UP AND TEAR DOWN			
2.	DRILL ACTUAL			
3.	REAMING			
4.	CORING			
5.	CONDITION MUD & CIRCULATE			
6.	TRIPS			
7.	LUBRICATE RIG			
8.	REPAIR RIG			
9.	CUT OFF DRILLING LINE			
10.	DEVIATION SURVEY			
11.	WIRE LINE LOGS			
12.	RUN CASING & CEMENT	1 3/4		
13.	WAIT ON CEMENT	6 1/4	8	8
14.	NIPPLE UP B.O.P.			
15.	TEST B.O.P.			
16.	DRILL STEM TEST			
17.	PLUG BACK			
18.	SQUEEZE CEMENT			
19.	FISHING			
20.	DIR. WORK			
21.				
22.				
23.				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY	8	8	8
Boilers	8	8	8
Camp	8	8	8
Tioga	8	0	0
TOTAL DAY WORK		8	8
NO. OF DAYS FROM SPUD	12		
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DRILLING ASSEMBLY (At end of tour) — MORNING TOUR

NO.		FT.
	BIT	
	STB RMR OD	
	D.C. ID OD	
	STB RMR OD	
	D.C. ID OD	
	STB RMR OD	
	STANDS DP	
	SINGLES DP	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	LBS.

BIT RECORD — MORNING TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD — MORNING TOUR

TIME	
~~WEIGHT~~	
~~PRESSURE GRADIENT~~	
~~VISC SEC~~	
~~PV YP~~	
~~GELS~~	
~~WL CC's~~	
~~pH~~	
~~SOLIDS %~~	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE — MORNING TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR..F COM..C
1025	C's D.T.											

DEVIATION RECORD — MORNING TOUR

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — MORNING TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0145	1 3/4		Pump Cement & Pump Plug down @ 1:45 am W.O.C.
0145	0800	6 1/4		Jet Cellar, Tear Out Hyd. 1 (20") Lift Same, Cut Cond BBL & Drain Csg & Clean Mud Tanks
				Fuel @ 7:00 am 62"

DRILLER: [signature]

DRILLING ASSEMBLY (At end of tour) — DAY TOUR

NO.		FT.
	BIT	
	STB RMR OD	
	D.C. ID OD	
	STB RMR OD	
	D.C. ID OD	
	STB RMR OD	
	STANDS DP	
	SINGLES DP	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	LBS.

BIT RECORD — DAY TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD — DAY TOUR

TIME	
~~WEIGHT~~	
~~PRESSURE GRADIENT~~	
~~VISC SEC~~	
~~PV YP~~	
~~GELS~~	
~~WL CC's~~	
~~pH~~	
~~SOLIDS %~~	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE — DAY TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S. P. M.	METHOD RUN SGL..S PAR..F COM..C
1025	1025											

DEVIATION RECORD — DAY TOUR

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — DAY TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1600	8		W. O. C. Cut off Csg. Lay down same. Lay down Hydrill & Conductor. Jet Cellar. Clean Suction Tank & Fill w/ water. Check Cement Level Between Csg & Conductor Cement down 40' 2 sides Cellar. Make up 3 Jts of 2 3/8 Tubing & Rig to Recement

WRITER: [signature]

DRILLING ASSEMBLY (At end of tour) — EVENING TOUR

NO.		FT.
	~~BIT~~	
1	Hughes STB RMR 11" OD	4.13
	D.C. ID 9" OD	12.73
2	STB ~~RMR~~ OD	59.04
	D.C. ID 9" OD	308.29
7	STB RMR OD	
1	9" Jars	8.24
1	9" C/O	.80
7	STANDS	314.15
2	SINGLES DP	
	KELLY DOWN	41.46
	TOTAL	1025.00
	WT. OF STRING	110,000 LBS.

BIT RECORD — EVENING TOUR

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD — EVENING TOUR

TIME	
~~WEIGHT~~	
~~PRESSURE GRADIENT~~	
~~VISC SEC~~	
~~PV YP~~	
~~GELS~~	
~~WL CC's~~	
~~pH~~	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE — EVENING TOUR

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR..F COM..C
1025	1025											

DEVIATION RECORD — EVENING TOUR

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG — EVENING TOUR

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2400	8		Heading up Flar Lines & Cap. ~~Ran Cement Plug 13 3/8 Annulus~~ To Sur. With 100 Saks Perma Frost Cement Plug was ran from 66 feet K.B to Sur. With Good Cement Returns Plug Down 1630 PM

DRILLER: [signature]

Slurry wt 14.8 lbs per gallon

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	AMOCO CDR C-12	02 05-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.6#	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Alsco	H-850	15

LEGAL LAND DESCRIPTION: AMOCO CDR A-1 CRANSWICK C-12

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE 1 7/8 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING	3 1/2		
4. CORING			
5. CONDITION MUD & CIRCULATE			3
6. TRIPS	1	1 1/2	
7. LUBRICATE RIG			
8. REPAIR RIG	2 1/2		
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT		4 1/2	$$
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Cond & Hole	1	1	
22. Mos.		1	
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	2 1/2	
HRS. W/OPR. D.P.			
HRS. WO. D.P.		5 1/2	8
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Frac Heater	8	8	0
TOTAL DAY WORK			
NO. OF DAYS FROM SPUD		11	
CUMULATIVE ROTATING HRS.			
TOTAL MUD COST			

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.56 FT.	
		4.12	
	STB RMR OD	12.73 FT.	
2	D.C. 2 ID 1 OD	59.04 FT.	
	STB RMR OD	FT.	
7	D.C. 7 3/4 ID 9 OD	209.24 FT.	
1	STB RMR Jack OD	8.42 FT.	
1	C/O	.80	
7	STANDS DP	717.15 FT.	
2	SINGLES DP	FT.	
	KELLY DOWN	11.46 FT.	
	TOTAL	1025.08 FT.	
WT. OF STRING	110,000 LBS.		

BIT RECORD

BIT NO.	R8
SIZE	17 1/2 REAMER
MFG.	Reed
TYPE	Pilot Reamer
JETS 1 32"	18 18 18
SER. NO.	
DEPTH OUT	~~1025~~
DEPTH IN	587
TOTAL FTG.	438
TOTAL HRS. RUN	25 1/2
COND. 1/8's T B GAGE	RUN
GPM PD-PSI	

MUD RECORD

TIME	0	04	07
WEIGHT	15	75	76
PRESSURE GRADIENT			
VISC.-SEC.	11	14	115
PV-YP	/	/	/
GELS	/	/	/
WL-CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
G-1	100 LBS		
[illegible]	2 LBS		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50 FT.	
4	Opener	4.12	
	STB RMR T.D. OD	12.73 FT.	
2	D.C. 2 ID 11" OD	59.04 FT.	
	STB RMR OD	FT.	
7	D.C. 7 3/4 ID 9" OD	209.29 FT.	
1	STB RMR OD	FT.	
1	Jars	8.42 FT.	
1	C/O	.80	
7	STANDS DP	717.15 FT.	
2	SINGLES DP	FT.	
	KELLY DOWN	11.46 FT.	
	TOTAL	1025.08 FT.	
WT. OF STRING	110,000 LBS.		

BIT RECORD

BIT NO.	8
SIZE	17 1/2 REAMER
MFG.	REED
TYPE	REAMER
JET 1 32"	18 18 18
SER. NO.	
DEPTH OUT	1025
DEPTH IN	587
TOTAL FTG.	438
TOTAL HRS. RUN	25 1/2
COND. 1/8's T B GAGE	2 2 1
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV-YP	/ /
GELS	/ /
WL-CC'S	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT	FT.	
	STB RMR OD	FT.	
	D.C. ID OD	FT.	
	STB RMR OD	FT.	
	D.C. ID OD	FT.	
	STB RMR OD	FT.	
	STANDS DP	FT.	
	SINGLES DP	FT.	
	KELLY DOWN	FT.	
	TOTAL	FT.	
WT. OF STRING	100 000 LBS.		

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV-YP	/ /
GELS	/ /
WL-CC'S	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PAR'L-P COMP'D-C
1025												
980	1025	R.			125	25	850	6 3/4	56	6 3/4	56	C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0230	2 1/2		Blow Kelly – Weld Mud Line
0230	0600	3 1/2		Ream 12 1/4 Hole To 17 1/2"
0600	0630	1/2		Circ To Cond Hole
0630	0730	1		Dummy Trip
0730	0800	1/2		Break Circ & Circ To Cond Hole For Csg.
				Fuel @ 7.00 am 30"

DRILLER: L Sandquist

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PAR'L-P COMP'D-C
1025	1025						850	6 3/4	56	6 3/4	56	C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Circ Prior To Run Csg.
0900	1030	1 1/2		Trip Out W/Csg.
1030	1130	1		Rig To Run Csg.
1130	1600	4 1/2		Run 13 3/8" Csg. Weld On Float & Shoe

DRILLER: [illegible]

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL-S PAR'L-P COMP'D-C
1025	1025						300	6 3/4	56			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1945	3 3/4		Finish Running 13 3/8 Pipe
1945	2245	3		Cir & Work Pipe Prior To Run Cement
2245	2400	1 1/4		Pump Cement & Work Pipe Collars
				RAN 24 Jts 13 3/8" Csg 68# K-55 STC. Ran Cement With 670 Sxs Perma Frost Cement And 350 Sxs Neat Oilwell Cement
				Plug Down 01:45 AM. No Cement Returns

DRILLER: D Hawkins

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO.

LEASE	WELL NO.	API WELL NUMBER	DATE
Ransuick	A-1	65-40-131-45	02-04-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
J Gaustans	Jim Kerchee

D.P. SIZE	WT. FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Wisco	H-850	15

LEGAL LAND DESCRIPTION 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.
SIZE 13/16 — NO. LINES 10 — FT. SLIPPED
FT. CUT OFF — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT
CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			
3. REAMING	6 1/4	8	7 3/4
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1 1/4		
7. LUBRICATE RIG	1/4		1/4
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Tiago Lite	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 10
CUMULATIVE ROTATING HRS.:
TOTAL MUD COST:

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	Opener	4.12	
1	STB RMR Drift	12.73	FT.
2	D.C. ID 11 OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. ID 9" OD	209.29	FT.
	STB RMR OD		FT.
1	Jars	8.92	
1	C/O	.80	
4	STANDS DP	373.54	FT.
	SINGLES DP		FT.
	KELLY DOWN	30.01	FT.
	TOTAL	700.00	FT.
WT. OF STRING		110,000	LBS.

BIT RECORD

BIT NO.	RR 7	
SIZE	12 1/4	17 1/2
MFG.	H-W	Reed
TYPE	XDV	Pilot
JETS 1 32"	18 18 18	Reamer
SER. NO.	CP224	
DEPTH OUT		
DEPTH IN	587	587
TOTAL FTG.		113
TOTAL HRS. RUN		
COND. 1/8's T B GAGE		
GPM/ PD-PSI		
	Opening Hole To 17"	

MUD RECORD

TIME		4	
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC.			
PV YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel		LBS	
Soda Ash		LBS	
	15	LBS	

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	Opener	4.12	
1	STB RMR Drift	12.93	FT.
2	D.C. ID 11" OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. ID 9" OD	209.29	FT.
	STB RMR OD		FT.
1	Jars	8.92	
1	C/O	.80	
4	STANDS DP	373.54	FT.
2	SINGLES DP	43.53	FT.
	KELLY DOWN	40.00	FT.
	TOTAL	770.93	FT.
WT. OF STRING		110,000	LBS.

BIT RECORD

BIT NO.	Reamer	
SIZE	17 1/2	
MFG.	Reed	
TYPE	Pilot	
JET 1 32"	Reamer	
SER. NO.		
DEPTH OUT		
DEPTH IN	587	
TOTAL FTG.		
TOTAL HRS. RUN		
COND. 1/8's T B GAGE		
GPM. PD-PSI		

MUD RECORD

TIME	9:00	11:00	2:00
WEIGHT	9.2	9.2	
PRESSURE GRADIENT			
VISC.-SEC.	140	240	140
PV YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1100		
Lime	6		

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1		4.12	
1	STB RMR OD	12.73	FT.
2	D.C. ID OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. ID OD	209.29	FT.
1	STB RMR Jars OD	8.92	FT.
1	C/O	.80	
7	STANDS DP	654.15	FT.
	SINGLES DP		FT.
	KELLY DOWN	30.00	FT.
	TOTAL	980.00	FT.
WT. OF STRING		110,000	LBS.

BIT RECORD

BIT NO.	Reamer	
SIZE	17 1/2	
MFG.	Reed	
TYPE	Pilot	
JETS 1 32"	18 18 18	
SER. NO.		
DEPTH OUT		
DEPTH IN	587	
TOTAL FTG.	393	
TOTAL HRS. RUN	22	
COND. 1/8's T B GAGE		
GPM. PD-PSI		

MUD RECORD

TIME	5:00	7:00	10:00
WEIGHT	9.5	9.5	9.5
PRESSURE GRADIENT			
VISC.-SEC.	145	195	165
PV YP			
GELS.			
WL -CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	2100		
Lime	8		

MORNING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METHOD RUN SGL. PART'L COMP'L
1025								6 3/4		6 3/4		
587	700	R			125	20/22	850	6 3/4	56	6 3/4	56	Com

DEVIATION RECORD: DEPTH 1025 — DEV. 3/4° — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0015	1/4		R.G. Serv.
0015	0130	1 1/4		Run in w/ Pilot Reamer, 11" DCs, Tele drift & Jars.
0130	0145	1/4		Break Circ.
0145	0800			Reaming 12 1/4 hole out to 17 1/2"
				Fuel @ 7:00 am 48"

DRILLER: L. Sandquist

DAY TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL. PART'L COMP'L
1025												
700	770	R.			125	20/25	850	6 1/4	56	6 3/4	56	C

DEVIATION RECORD: DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1600	8		R. Reaming 12 1/4" to 17 1/2" Hole.

DRILLER: L. Sandquist

EVENING TOUR

FOOTAGE FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL. PART'L COMP'L
770	980	RMR			125	20/30	850	6 1/4	56	6 3/4	5	C

DEVIATION RECORD: DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1815	2 1/4		Reaming Pilot Hole
1815	1830	1/4		Rig Serv. & Hydrill
1830	2400	5 1/2		Reaming 12 1/4 to 17 1/2

DRILLER: D. Hewitt

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 10

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1		2-3-74

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Rowden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
J. Starstairs	Jim Kerbow

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5#	E	6 3/4"	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Wisc	H-850	16

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE 1 3/8" | NO. LINES 10 | FT. SLIPPED | FT. CUT OFF | PRESENT LENGTH | TON MI. OR TRIPS SINCE LAST CUT | CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	5 1/4		
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1	2 1/2	3/4
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY	3/4		
11. WIRE LINE LOGS			4 1/4
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.		1/2	
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Cond Hole	1	3 1/2	
22.			
23. Log & Handle Tools		2	
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.			
HRS. WO. D.P.			
HRS. STANDBY			
Boiler 2	8	8	8
Camp	8	8	8
Frogs Hotted	8	8	8
TOTAL DAY WORK			

NO. OF DAYS FROM SPUD: 9

CUMULATIVE ROTATING HRS.: 64 1/4

TOTAL MUD COST: 2700.12

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	B.T.Sub	3.80	
	STB RMR OD		FT.
6	D.C 9" ID OD	178.64	FT.
1	STB RMR 9 0 OD	.80	FT.
	D.C ID OD		FT.
	STB RMR OD		FT.
8	STANDS DP	810.61	FT.
2	SINGLES DP		FT.
	KELLY DOWN	29.55	FT.
	TOTAL	1025.00	FT.
WT. OF STRING		82,000	LBS.

BIT RECORD

BIT NO.	7
SIZE	12 1/4
MFG.	H-W
TYPE	XDV
JETS 1 32"	18 18 18
SER. NO.	CP224
DEPTH OUT	
DEPTH IN	587
TOTAL FTG.	438
TOTAL HRS. RUN	22
COND. 1 8's T B GAGE	
GPM/ PD–PSI	

MUD RECORD

TIME	5:00	4:00	6:00
WEIGHT	73	73	74
PRESSURE GRADIENT			
VISC.–SEC.	210	123	123
PV YP	/	/	24 44
GELS.	/	/	16 64
WL –CC'S.			9.6
pH			7.6
SOLIDS %			8.0

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	6 00 #		
Soda Ash	100 #		
Barex	4 #		

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.S PARAL-P COM'D-C
878	1025	DR.			125	20m	1500	6 3/4	56	6 3/4	56	S
							750	6 3/4	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	910	1 1/8°		970	3/4°		1025		

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0115	1 1/4		Drlg 12 1/4" Hole 0700-0800 Hoist To Log (Strap Out)
0115	0130	1/4		Survey
0130	0345	2 1/4		Drlg 12 1/4" Hole
0345	0400	1/4		Survey
0400	0545	1 3/4		Drlg 12 1/4" Hole Reached Csg Depth
0545	0645	1		Circ To Cond Hole For Logging
0645	0700	1/4		Survey
				26° Fuel @ 7:00 am

DRILLER: L Sandquist

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	150	FT.
1	Bit Sub	3.80	
	STB RMR OD		FT.
6	D.C 9" ID OD	178.64	FT.
1	STB RMR 9 0 OD	80	FT.
	D.C ID OD		FT.
	STB RMR OD		FT.
8	STANDS DP	810.61	FT.
2	SINGLES DP		FT.
	KELLY DOWN	29.55	FT.
	TOTAL	1025.00	FT.
WT. OF STRING		82,000	LBS.

BIT RECORD

BIT NO.	RR 7
SIZE	12 1/4
MFG.	H.W.
TYPE	XDV
JET 1 32"	18 18 18
SER. NO.	CP224
DEPTH OUT	Clean Out
DEPTH IN	Out
TOTAL FTG.	Trip
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM/ PD–PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	13
PV YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL.S PARAL-P COM'D-C
1025	1025						1800	6 3/4	56	6 3/4		S
							Temps	Comp				

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Trip Out
0830	0900	1/2		Rig Up Loggers
0900	1030	1 1/2		Unable To Get In w/ Log Tool (Tear Out Same)
1030	1130	1		Trip In – Clean Out Trip
1130	1315	2 1/4		Break Circ. Clean 8' To Btm. Circ. & Work Pipe
1345	1415	1/2		Dummy Trip 5 Stds.
1415	1530	1 1/4		Circ Prior To Log
1530	1600	1/2		Blow Kelly & Trip Out To Log

DRILLER: Frank Judy 5-3

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	STB RMR 9" OD	4.13	FT.
	D.C ID OD		FT.
1	STB RMR Full OD	12.73	FT.
	D.C ID OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	RR 7
SIZE	17 1/2
MFG.	Reed
TYPE	XDV
JETS 1 32"	18 18 18
SER. NO.	CP224
DEPTH OUT	
DEPTH IN	587
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM/ PD–PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV/YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.S PARAL-P COM'D-C
1025								6 3/4		6 3/4		S

Logs: BHC Sonic Cal. per 2"&5" 0-1024 BHT 94° F.
DIL 2"&5" 50-1020 95° F. Loggers TD 1026 KB

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	1 set Logs sent to E. Holan Ferde Pc w/a AMOCO Offset to Cal								

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1730	1 1/2		Hoist Out Slowly (Rotate Slowly) for Logging
1730	1745	1/4		Rig Up loggers
1745	2145	4		Logging w/ Slumbuger & Tear Same Out.
2145	2400	2 1/4		Pick Up 17 1/2" Pilot Reamer & Sub's To Ream & Weld 15 Stabs On 12 1/4 Bit To Pilot Body

DRILLER: D Newbo

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 9

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	6540 - 131 - 45	02-02-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drlg	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Starstairs	Jim Kaelin

D.P. SIZE	WT. / FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 3/4"	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	Emsco	D-850	16

LEGAL LAND DESCRIPTION 65 - 40 - 131 - 45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF — PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	4 1/2	6 1/2	5 3/4
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS	2 3/4		
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY	1/4	1 1/2	2 1/4
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21				
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boiler 2	8	8	8
Camp	8	8	8
Fuel & Heater	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD	8
CUMULATIVE ROTATING HRS.	59
TOTAL MUD COST	2539.32

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	B.T.Sub	3.80	
	STB RMR OD		FT.
6	D.C. ID 9" OD	178.64	FT.
1	STB RMR C/O Sub OD	.80	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
4	STANDS DP	434.53	FT.
2	SINGLES DP		FT.
	KELLY DOWN	41.27	FT.
	TOTAL	659.00	FT.
WT. OF STRING	80M		LBS.

BIT RECORD

BIT NO.	6	7	
SIZE	17 1/2	12 1/4	
MFG.	Reed	H.W	
TYPE	SSIGJ	XDV	
JETS 1 32"	16 16 16	18 18 18	
SER. NO.	57562	CP224	
DEPTH OUT	587		
DEPTH IN	301	587	
TOTAL FTG.	286	72	
TOTAL HRS. RUN	15 1/4	4 1/2	
COND. 1 8's T B GAGE	2 2 1	3N	

MUD RECORD

TIME	3 30	5 30	7 30
WEIGHT	14	14	13+
PRESSURE GRADIENT			
VISC.-SEC.	170	180	165
PV YP	/	/	23/49
GELS.	/	/	20/68
WL-CC'S.			10.8
pH			8.0
SOLIDS %			8

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	100 #		
Ash	100 #		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	B.T.Sub	3.80	
	STB RMR OD		FT.
6	D.C. ID 9" OD	178.64	FT.
1	STB RMR C/O OD	.80	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
5	STANDS DP		FT.
2	SINGLES DP	52.52	FT.
	KELLY DOWN	15.43	FT.
	TOTAL	729.00	FT.
WT. OF STRING	80M		LBS.

BIT RECORD

BIT NO.	7		
SIZE	12 1/4		
MFG.	H.W.		
TYPE	XDV		
JET 1 32"	18 18 18		
SER. NO.	CP224		
DEPTH OUT			
DEPTH IN	587		
TOTAL FTG.	142		
TOTAL HRS. RUN	11		
COND. 1 8's T B GAGE			

MUD RECORD

TIME	7:00	11 AM	1:00
WEIGHT	9.4	9.1	9.4
PRESSURE GRADIENT			
VISC.-SEC.	120	120	300
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	100 #		
Lignite	100 #		

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50	FT.
1	B.T.Sub	3.80	
	STB RMR OD		FT.
6	D.C. ID 9" OD	178.64	FT.
1	STB RMR C/O OD	.80	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
7	STANDS DP	653.15	FT.
2	SINGLES DP		FT.
	KELLY DOWN	41.00	FT.
	TOTAL	904.89	FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	7		
SIZE	12 1/4		
MFG.	HW		
TYPE	XDV		
JETS 1 32"	18 18 18		
SER. NO.	CP224		
DEPTH OUT			
DEPTH IN	587		
TOTAL FTG.	291		
TOTAL HRS. RUN	16 3/4		
COND. 1 8's T B GAGE			

MUD RECORD

TIME	400	800	1100
WEIGHT	9.6	9.3	9.3
PRESSURE GRADIENT			
VISC.-SEC.	500	250	200
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Mix		Lignite	

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PARFL-F COM-D-C
587	659	D			125	10/12	1500	6 3/4	56	6 3/4	56	
								Pumps Compounded				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
625	2°							

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0145	1 3/4		Trip - Stand Back 11" DC's & Lay down Drift Sub
0145	0245	1		Run in w/ 6 - 9" DC's x B.T #7 (12 1/4")
0245	0300	1/4		Break Circ.
0300	0500	2		Drlg w/ B.T 7
0500	0530	1/2		Survey
0530	0800	2 1/2		Drlg 12 1/4" Hole
				48 in ss Fuel in Rig Tank.

DRILLER: Sandquist

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SCL-S PARFL-F COM-D-C
659	729	D			125	10/12	1500	6 3/4	56	6 3/4		S
									Compounded			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
650	1 1/2°							

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0830	1/2		Survey.
0830	1045	2 1/4		Drill 12 1/4" Hole
1045	1115	1/2		Survey
1115	1415	3		Drill
1415	1445	1/2		Survey.
1445	1700	1 1/4		Drill

DRILLER: Jorgenson

FOOTAGE / FORMATION

FROM	TO	DR'D RM'R CORE'D	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL-S PARFL-F COM-D-C
729	878	Dr.			125	10/12	1500	6 3/4	56	6 3/4		
					125	30	750		51			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
715	1 3/4		746	1 1/2°		847	1 1/2	

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1630	1/2		Survey @ 715 1 3/4°
1630	1830	2		Drill w/ 10/12 M
1830	1900	1/2		Survey @ 746 1 1/2°
1900	2045	1 3/4		Drill w/ 20M
2045	2130	3/4		Survey @ 810 (Clock Not Working)
2130	2230	1		Drill w/ 20M.
2230	2300	1/2		Survey @ 847 1 1/2°
2300	2400	1		Drill w/ 20M

DRILLER: D. Hewko

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 8

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A1	6540-131-45	02-01-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Bawden Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
J Carstairs	

LEGAL LAND DESCRIPTION 65-40-131-45

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	H-820	16

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED
1 3/8	10	

FT. CUT OFF 500 — PRESENT LENGTH 7000

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	4 1/2	6 1/4	4 1/2
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	1 3/4		1
7. LUBRICATE RIG		1/4	1/4
8. REPAIR RIG		1	
9. CUT OFF DRILLING LINE	1 1/2		
10. DEVIATION SURVEY	1/4	1/2	2 1/4
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Survey	X		
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TSG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Floya Hewton	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD	7
CUMULATIVE ROTATING HRS.	42 1/4
TOTAL MUD COST	2298.00

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 17 1/2	1.50	FT.
1	C/O	348	
	STB RMR OD		FT.
2	D.C. 3 ID 11 OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. 5 ID 9 OD	209.29	FT.
	STB RMR OD		FT.
1	C/O	12.75	
	Jars	8.92	
1	Stabilizer	1.85	
	STANDS DP		FT.
2	SINGLES DP	61.85	FT.
	KELLY DOWN	22.37	FT.
	TOTAL	380	FT.

WT. OF STRING 90,000 LBS.

BIT RECORD

BIT NO.	6
SIZE	17 1/2
MFG.	Reed
TYPE	YSIG-J
JETS 1 32"	16 16 16
SER. NO.	57562
DEPTH OUT	
DEPTH IN	301
TOTAL FTG.	77
TOTAL HRS. RUN	4 1/2
COND. 1/8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

	0300	0500	0700
TIME			
WEIGHT	9.0	13	13
PRESSURE GRADIENT			
VISC.-SEC.	42	45	85
PV/YP	/	/	20/35
GELS.	/	/	8.38
WL-CC'S.			12.4
pH			8.5
SOLIDS %			6.5

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Salt	1000 lb		
Drispac	100 lb		
Bicarb	10 lb		

FOOTAGE / FORMATION

FROM	TO	DR.D RM-R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
301	380	D			125	10/12	720	6 3/4	56			S

DEVIATION RECORD: DEPTH 360, DEV. 1°, DIRECTION X

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0130	1 1/2		Slip - cut 200' Dolphin
0130	0315	1 3/4		[illegible]
0315	0600	2 3/4		Drilling 12 1/2 hole
0600	0615	1/4		Survey @ 360'
0615	0800	1 3/4		Drilling 12 1/2 hole

DRILLER M Lewis

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 17 1/2	1.50	FT.
1	C/O	3.48	
1	STB RMR Std. Def OD	12.75	FT.
2	D.C. 3 ID 11 OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. 5 ID 9 OD	209.29	FT.
	STB RMR OD		FT.
1	C/O	.80	
	Jars	8.92	
1	Stabilizer	1.85	
	STANDS DP	154.77	FT.
2	SINGLES DP		FT.
	KELLY DOWN	38.06	FT.
	TOTAL	489.00	FT.

WT. OF STRING 97,000 LBS.

BIT RECORD

BIT NO.	6
SIZE	17 1/2
MFG.	Reed
TYPE	YSIG-J
JET 1 32"	16 16 16
SER. NO.	57562
DEPTH OUT	
DEPTH IN	301
TOTAL FTG.	188
TOTAL HRS. RUN	10 3/4
COND. 1/8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

TIME	11 [illegible]	[illegible]	
WEIGHT	[illegible]	13	13
PRESSURE GRADIENT			
VISC.-SEC.	[illegible]	[illegible]	
PV/YP	/	/	/
GELS.	/	[illegible]	[illegible]
WL-CC'S.		[illegible]	
pH			[illegible]
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Salt	[illegible] #		
[illegible]	[illegible] #		
[illegible]	[illegible] #		

FOOTAGE / FORMATION

FROM	TO	DR.D RM-R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN
380	489	D			125	30/35	1700	6 3/4	56	6 3/4	56	P

DEVIATION RECORD: DEPTH 390, DEV. 1°, DIRECTION A, DEPTH 820, DEV. 1°

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Drlg 17 1/2" Hole
0900	0915	1/4		Survey
0915	0930	1/4		Rig Serv
0930	1200	2 1/2		Drlg 17 1/2" Hole
1208	1215	1/4		Survey
1215	1300	3/4		Drlg 17 1/2 Hole
1300	1400	1		Work on Mudline (Union)
1400	1600	2		Drlg 17 1/2 Hole

DRILLER [illegible]

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 17 1/2	150	FT.
1	C/O	348	
1	STB RMR Reed	12.75	FT.
2	D.C. 3 ID 11 OD	59.04	FT.
	STB RMR OD		FT.
7	D.C. 5 ID 9 OD	209.29	FT.
	STB RMR OD		FT.
1	C/O	.80	
	Jars	8.92	
1	Stab Valve	1.85	
3	STANDS DP		FT.
2	SINGLES DP	249.11	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	587.74	FT.

WT. OF STRING 98,000 LBS.

BIT RECORD

BIT NO.	6
SIZE	17 1/2
MFG.	Reed
TYPE	YSIG-J
JETS 1 32"	16 16 16
SER. NO.	57562
DEPTH OUT	587
DEPTH IN	301
TOTAL FTG.	286
TOTAL HRS. RUN	15 1/4
COND. 1 8's T B GAGE	
GPM/ PD-PSI	

MUD RECORD

	4:00	8:00	11:00
TIME			
WEIGHT	9.4	9.4	9.4
PRESSURE GRADIENT			
VISC.-SEC.	170	200	200
PV/YP	/	/	/
GELS.	/	/	/
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Salt	1 sack		
Barite	8 sacks		

FOOTAGE / FORMATION

FROM	TO	DR.D RM-R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN
489	587	D			125	35/20	1800	6 3/4	56	6 3/4	6 3/4	P

DEVIATION RECORD: DEPTH 480, DEV. 1°, DIRECTION, DEPTH 543, DEV. 1 1/2°, DIRECTION, DEPTH 573, DEV. 2°, DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1630	1/2		Rig Serv. & Wireline Survey
1630	1400	2 1/2		Drill 17 1/2" Hole
1900	1930	1/2		Survey
1930	2130	2		Drill
2130	2300	1 1/2		Survey Run 3 Surveys 2 misruns.
2300	2400	1		Blow Kelly Trip f/ Bit.

DRILLER [illegible]

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 7

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A1	05-40-131-45	01/31/72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Reter Brewster Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: J. Carstairs

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Jim Kerbo

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5"	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	H 850	16

LEGAL LAND DESCRIPTION: 6S-40-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE | NO. LINES | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL	4 1/4		1/2
3	REAMING	3 3/4	1 1/2	6 1/4
4	CORING			
5	CONDITION MUD & CIRCULATE		1/2	
6	TRIPS	1/2	1	1 1/4
7	LUBRICATE RIG			
8	REPAIR RIG		5	
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT			
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT			
19	FISHING			
20	DIR. WORK			
21	SURVEY	1/2		
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO/D.P.			
HRS. STANDBY			
Boilers	8	8	8
Camp	8	8	8
Toolpusher	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 6

CUMULATIVE ROTATING HRS.: 27

TOTAL MUD COST: 2005.00

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT 12 1/4	1.50 FT.	
1	C/O	.80 FT.	
	STB RMR OD	FT.	
6	D.C. 9 OD / 2 ID	178.64 FT.	
	STB RMR OD	FT.	
	D.C. ID OD	FT.	
	STB RMR OD	FT.	
1	BT Sub	3.80	
1	STANDS DP	1078 FT.	
	SINGLES DP	FT.	
	KELLY DOWN	16.78 FT.	
	TOTAL	210 FT.	

WT. OF STRING 65 000 LBS.

BIT RECORD

BIT NO.	5
SIZE	12 1/4
MFG.	Reed
TYPE	YMG-J
JETS 1 32"	16 16 16
SER. NO.	686462
DEPTH OUT	292
DEPTH IN	196
TOTAL FTG.	96
TOTAL HRS. RUN	5 1/2 RT
COND. 1/8's T B GAGE	5 2 1
GPM PD-PSI	14 RM.

MUD RECORD

TIME	Mid	Dwn	07.10
WEIGHT	9		9
PRESSURE GRADIENT			
VISC.-SEC.	41	41	41.0
PV/YP	1 / 1	1 / 1	16/60
GELS	1 / 1	1 / 1	23/55
WL-CC'S			13.2
pH			8.3
SOLIDS %			9.5

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	2300 LBS		
Conc.	100 LBS		
Pen I	8 LBS		

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50 FT.	
1	Tele-Daft	12.75	
1	STB RMR C/O OD	3.48 FT.	
2	D.C. 8 3/4 ID 11 OD	59.04 FT.	
	STB RMR OD	FT.	
13	D.C. ID 9" OD	30.65 FT.	
	STB RMR OD	FT.	
1	C/O Sub	.80	
	STANDS DP	FT.	
	SINGLES DP	FT.	
	KELLY DOWN	37.78 FT.	
	TOTAL	146.00 FT.	

WT. OF STRING 65,000 LBS.

BIT RECORD

BIT NO.	3 RR
SIZE	17 1/2
MFG.	Reed
TYPE	STIAJ
JET 1/32"	16 16 16
SER. NO.	86326
DEPTH OUT	
DEPTH IN	100
TOTAL FTG.	
TOTAL HRS. RUN	RM 1 1/2
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME			3.32
WEIGHT			14
PRESSURE GRADIENT			
VISC.-SEC.			145
PV/YP	/	/	/
GELS	/	/	/
WL-CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Bi-Card	3/4 #		
Con-1	1/2 #		
Penex	6 #		

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO./ LINER SIZE	PUMP NO./ S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-P COM.D-C
224	292	D			125	10	1300	6 3/4	56			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
220	1/4°	X	282	3/4°	X			

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0245	2 3/4		Ream Clean Hole F/ Connection
0245	0300	1/4		Survey
0300	0715	4 1/4		Drilling 12 1/4 Hole
0715	0730	1/4		Survey
0730	0800	1/2		Trip.

DRILLER: Mayers

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-P COM.D-C
242	242											
Reamed												
100	146											

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Trip - Pick Up 11" DC's + Running in BIT #3
0900	0930	1/2	T	Break Circ @ 100', Mud Cement Contain
0930	1430	5		Work on Pumps Due To High Sand Cont.
1430	1600	1 1/2		Ream 12 1/2 Hole To 17 1/2 Hole 100 - 146
			T	

DRILLER: L. Sandstairs

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL.-S PAR.FL.-P COM.D-C
146	292	R			125	10/15	900	6 3/4	56			
292	301	D										

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2215	6 1/4	R	Ream 12 1/4 to 17 1/2" Hole
2215	2245	1/2	D	Drill 17 1/2" Hole
2245	2400	1 1/4		Blow Kelly Trip Out Change Bits

DRILLER

FORM 3T5

APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 6

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A1	65-40-131-45	01 30 72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Kewitt Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
J Carstairs	Jim Kenter

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	18
2	National	1320	16

LEGAL LAND DESCRIPTION: 65-40-131-45

WIRE LINE RECORD — REEL NO. — SIZE 3/8 — NO. LINES 10 — FT. SLIPPED — FT. CUT OFF — PRESENT LENGTH — TON MI. OR TRIPS SINCE LAST CUT — CUMULATIVE TON MI. OR TRIPS

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL			1 1/4
3. REAMING		4 1/2	2 3/4
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS	2	1/2	
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT	1		
13. WAIT ON CEMENT	5	3	
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.			
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	
HRS. W/OPR. D.P.	
HRS. WO/D.P.	
HRS. STANDBY	
Boiler	8 8 8
Camp	8 8 8
Tech Hunts	8 8 8
TOTAL DAY WORK	8 8 8
NO. OF DAYS FROM SPUD	5
CUMULATIVE ROTATING HRS.	22 1/4
TOTAL MUD COST	1511.00

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	4
SIZE	12 1/4
MFG.	Reed
TYPE	SS16J
JETS 1 32"	16 16 16
SER. NO.	145354
DEPTH OUT	116
DEPTH IN	100
TOTAL FTG.	16
TOTAL HRS. RUN	2 3/4 RM 10 1/2
COND. 1/8's T B GAGE	7 2 1
GPM. PD–PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.–SEC.	
PV YP	
GELS.	
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1500 lbs		
Cust	100 lbs		
D.C. AB	20 lbs		
Soda Ash	3 lbs		

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	8 1/2 S.S.	80	FT.
	STB RMR OD		FT.
5	D.C. 9" ID OD	150.03	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	B.T.S.b	3 80	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	40.47	FT.
	TOTAL	196.00	FT.
WT. OF STRING	66m		LBS.

BIT RECORD

BIT NO.	5
SIZE	12 1/4
MFG.	Reed
TYPE	YMG-J
JET 1 32"	16 16 16
SER. NO.	686762
DEPTH OUT	
DEPTH IN	196
TOTAL FTG.	
TOTAL HRS. RUN	4 1/2 RM
COND. 1 8's T B GAGE	
GPM. PD–PSI	

MUD RECORD

TIME	1300 1 1700
WEIGHT	8.3 8.3 8.4
PRESSURE GRADIENT	
VISC.–SEC.	40 40 42
PV YP	/ /
GELS.	/ /
WL –CC'S.	
pH	
SOLIDS %	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	5800 lbs		
Soda Ash	100 lbs		
Bicarb	100 lbs		
Lignox	4 lbs		

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	8 1/2 Sub	80	FT.
	STB RMR OD		FT.
6	D.C. ID 9" OD	1786	FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
1	Bit Sub	380	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	41.00	FT.
	TOTAL	2257	FT.
WT. OF STRING	66m		LBS.

BIT RECORD

BIT NO.	5
SIZE	12 1/4
MFG.	Reed
TYPE	YMG-J
JETS 1 32"	16 16 16
SER. NO.	686462
DEPTH OUT	
DEPTH IN	196
TOTAL FTG.	28
TOTAL HRS. RUN	11 1/4 RM
COND. 1 8's T B GAGE	
GPM. PD–PSI	

MUD RECORD

TIME	2100 0100 0700
WEIGHT	8.4 8.4 8.4
PRESSURE GRADIENT	
VISC.–SEC.	42 42 42
PV YP	12 16 12 16 12 16
GELS.	15 16 15 16 15 16
WL –CC'S.	17.6
pH	8.5
SOLIDS %	8.0

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	5800 lbs		
Soda Ash	100 lbs		
Bicarb	100 lbs		
Lignox	4 lbs		

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PAR'EL–P COMP'D–C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0810	2		Blow Kelly Lay down 2 DC's & Stand Back (1-std)
0810	2230	1/2		Rig To Cement w 2 swages
2230	0300	1/2		Cement w/ 225 Sks
0300	0800	5		WOC
#4 Recement conductor pipe by squeezing 225 SAX permafrost cement + 2% CaCl2 P.I.P 3 AM Jan 30/72				

DRILLER: L. Lucas

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PAR'EL–P COMP'D–C
196					100	8-10	700	6 3/4	115			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1100	3		W.O.C.
1100	1130	1/2		Run Make Up B.T & Run TIW
1130	1600	4 1/2		Reaming To BTm. Cement Plug @ 70' Drlg Mud Cement Contaminated. Cond Mud While Reaming For Connection

DRILLER: L. Sundstrom

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL–S PAR'EL–P COMP'D–C
196	2247D				100	10	700	6 3/4	46			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	2030	4 1/2		Reaming For Connection & Condition Mud.
2030	2145	1 1/4		Drill 12 1/4" Hole
2145	2400	2 1/4		Ream f/ Core

DRILLER: M. Ingebrigtsen

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 5

LEASE	WELL NO.	API WELL NUMBER	DATE
CRANSWICK	A-1	65-40-131 45	01 29 72

OPERATOR	CONTRACTOR	RIG NO.
Arco	Peter Kewitt Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Harstairs	Ray Kesler

D.P. SIZE	WT. FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
2"	19.5	E	6 3/4	4½ IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D 1100	8
2	National	11 P 80	16

LEGAL LAND DESCRIPTION: 65-40-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE	NO. LINES	FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL		1	13¼
3. REAMING		5	5½
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT	1		
13. WAIT ON CEMENT	7	2	
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Survey			1/4
22. Misc.			1/2
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.			
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Texas Hunter	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 4

CUMULATIVE ROTATING HRS.: 21

TOTAL MUD COST: 1107

DAY TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD		MUD RECORD			
	BIT	FT.	BIT NO.		TIME	11 30	1 30	3 -
1	6" Sub	.80	SIZE	12¼	WEIGHT	70	11	1.3
	STB RMR OD	FT.	MFG.	Reed	PRESSURE GRADIENT			-
3	D.C. ID 9" OD	9180 FT.	TYPE	55 1G-J	VISC.-SEC.	45	42	113
	STB RMR OD	FT.	JET 1 32"	18 18 18	PV/YP	/	/	5/70
	D.C. ID OD	FT.	SER. NO.	195354	GELS.	/	/	15 40
	STB RMR OD	FT.	DEPTH OUT		WL -CC'S.			30
1	B.T. Sub	3.80	DEPTH IN	100	pH			9.5
			TOTAL FTG.	25	SOLIDS %			6.5
			TOTAL HRS. RUN	1				-
	STANDS DP	FT.	COND. 1 8's T B GAGE	/	MUD & CHEMICALS ADDED			
	SINGLES DP	FT.	GPM PD-PSI		TYPE	AMT.	TYPE	AMT.
	KELLY DOWN	27.10 FT.			Gel	2800 #		
	TOTAL	125 FT.			Lime	50 #		
WT. OF STRING	50,000 LBS.				Barex	34 #		

EVENING TOUR

NO.	DRILLING ASSEMBLY (At end of tour)		BIT RECORD		MUD RECORD			
1	BIT	150 FT.	BIT NO.	4	TIME	1 -	6 00	11 00
1	6" Sub	80	SIZE	12¼	WEIGHT	47	12	1
	STB RMR OD	FT.	MFG.	Reed	PRESSURE GRADIENT			
5	D.C. ID 9" OD	15093 FT.	TYPE	55 1G-J	VISC.-SEC.	70	45	70
	STB RMR OD	FT.	JETS 1 32"	18 18 18	PV/YP	/	/	/
	D.C. ID OD	FT.	SER. NO.	195354	GELS.	/	/	/
	STB RMR OD	FT.	DEPTH OUT		WL -CC'S.			
1	Bit Sub	3.80	DEPTH IN	100	pH			
			TOTAL FTG.	96	SOLIDS %			
			TOTAL HRS. RUN	2 3/4 RM 10½				
	STANDS DP	FT.	COND. 1 8's T B GAGE	/	MUD & CHEMICALS ADDED			
	SINGLES DP	FT.	GPM PD-PSI		TYPE	AMT.	TYPE	AMT.
	KELLY DOWN	41.00 FT.			Gel	100		
	TOTAL	194.03 FT.			Lime	30 #		
WT. OF STRING	66 m LBS.				Barex	78 #		

DAY TOUR

FOOTAGE FROM / TO | DR.-D RM.-R CORE.-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. 1: LINER SIZE / S.P.M. | PUMP NO. 2: LINER SIZE / S.P.M. | METHOD RUN: SGL.-S PAR.FL.-P COM.D-C

FROM	TO											
100	125				125	10	12	450	6¾	55	6¾	

DEVIATION RECORD: DEPTH 90 | DEV. 5/8° | DIRECTION

TIME LOG FROM / TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1000	2		W.O.C. Clean Cellar & Matting
1000	1300	5		Break Circ. Clean & Ream Sub Connection
1300	1600	1		Drlg 12¼" Hole & Survey
				Boulders Too 112, Small Gravel and Clay Too 125

DRILLER: L. Sundown Jr.

EVENING TOUR

FOOTAGE FROM / TO | DR.-D RM.-R CORE.-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. 1: LINER SIZE / S.P.M. | PUMP NO. 2: LINER SIZE / S.P.M. | METHOD RUN: SGL.-S PAR.FL.-P COM.D-C

FROM	TO											
125	196				125	10	450	6¾	56	6¾		

DEVIATION RECORD: DEPTH 150 | DEV. ½° | DIRECTION

TIME LOG FROM / TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1930	3½		Clean & Ream Kelly Connection
1930	2030	1		Drill 12¼" Hole
2030	2200	1½		Ream & Clean f/ Cond.
2200	2215	¼		Survey
2215	2300	¾		Drill
2300	2330	½		Ream & Clean
2330	2400	½		Washed Out Cellar Jet. Wash Down Mud Tank & Pre-Mix

DRILLER: L. Sundown Jr.

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 4

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	42-40 131 42	01-28-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Cowden Drilling	31

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S TOOL PUSHER
Horstairs	Tom Conway Jr.

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-1000	13
2	National	4 P 50	16

LEGAL LAND DESCRIPTION 65-40-131-45

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.
SIZE 1 3/8 — NO. LINES 10 — FT. SLIPPED
FT. CUT OFF — PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT
CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN		2	
2	DRILL ACTUAL			
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS	1	1 1/2	
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT			
13	WAIT ON CEMENT		1 1/2	6 1/2
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEMENT		3	
19	FISHING			
20	DIR. WORK			
21		7	2	1 1/2
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Trans Heating	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD	3
CUMULATIVE ROTATING HRS.	18 1/4
TOTAL MUD COST	902.00

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	12 1/4	FT.
1	Tele-Co-Drift	11.22	
1	STB RMR C/O OD	8 0	FT.
	D.C. ID OD		FT.
1	STB RMR C/O OD	3 4 5	FT.
2	D.C. ID 11 OD	59.04	FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	24.97	FT.
	TOTAL	100.00	FT.
WT. OF STRING		56,000	LBS.

BIT RECORD

BIT NO.	3
SIZE	12 1/4
MFG.	Reed
TYPE	T44-J
JETS 1 32"	3 x 18
SER. NO.	863624
DEPTH OUT	100
DEPTH IN	100
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	/ /

MUD RECORD

TIME			
WEIGHT	9.3	9.3	9.3
PRESSURE GRADIENT			
VISC.-SEC.	85	75	75
PV YP	/ /	/ /	/ /
GELS	/ /	/ /	/ /
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	6500 LBS		

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING		56,000	LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	/ /

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC			
PV YP	/ /	/ /	/ /
GELS			
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.00	FT.
1	Bit Sub	3.80	
	STB RMR & OD		FT.
1	D.C. ID 9" OD	30.65	FT.
1	STB RMR C/O OD	80	FT.
	D.C. ID OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	4
SIZE	12 1/4
MFG.	Reed
TYPE	S516-T
JETS 1 32"	18 18 18
SER. NO.	195354
DEPTH OUT	
DEPTH IN	100'
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM PD-PSI	/ /

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC			
PV YP	/ /	/ /	/ /
GELS			
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1500 #		
Lime	6		

FOOTAGE FROM 100 — TO

DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO LINER SIZE	PUMP NO S.P.M.	METHOD R IN SCL-S PARTI- COM D-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0100	1		Trip out Change Bits
0100	0800	7		Ream Cellar Jet + Work up Soft Clay + Mud Tanks in Out Tandem Pump
				Recement conductor pipe by Squeezing 200 Sax Perma Frost cement + 2% CACl2. PTP 1430/01 28 72. #2 Average slurry wt 14.2 #/gal

DRILLER

DAY TOUR

FOOTAGE FROM 100 — TO

DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO.2 LINER SIZE	PUMP NO.2 S.P.M.	METHOD R IN SCL-S PARTI- COM D-C
						6 1/4		6 3/4		

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1000	2		Work on Cellar Jet (Unable To Keep Up)
1000	1130	1 1/2		Trip Out Break Bit Off + Stand Back 11" DCs in Derk + Blow Kelly
1130	1330	2		Pick Up 2 Jts 5" Drill Pipe + Rig Up Halliburton To Cement Cond. 38L.
1330	1430	1		Cementing Conductor 38L (Squeeze)
1430	1600	1 1/2		W.O.C. Jet Collar Out + Pick Up 9" DCs

DRILLER

EVENING TOUR

FOOTAGE FROM 100 — TO

DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO.1 LINER SIZE	PUMP NO.1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO S.P.M.	METHOD R IN SCL-S PARTI- COM D-C
						6 3/4				

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600				W.O.C.
				Clean up cellar + matting wash down Sand
				Pick up Bit Sub. Bit make up same
				Install new chain in Compound. General
	2230	6 1/2		Rig clean up.
2230	2300	1/2		Pick up Kelly Break Circ Conductor Bbl Losing Around
2300	2400	1		Set Back Kelly Break Down Rig, Lay Boyles Coffee
				Pick up 9 Singles

DRILLER

3T5

APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 3

LEASE	WELL NO.	API WELL NUMBER	DATE
Chadswick	A1	65-40-131-45	01 27 72
OPERATOR		**CONTRACTOR**	**RIG NO.**
Amoco		Peter Bawden Drilling	31
SIGNATURE OF OPERATOR'S REPRESENTATIVE		**SIGNATURE OF CONTRACTOR'S TOOL PUSHER**	
Harstars		Tom Penning Jam.	

D.P. SIZE	WT. FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
5	19.5	E	6 3/4	4 1/2 IF	1	1	Emsco	D-4000	1.8
						2	National	H 850	

LEGAL LAND DESCRIPTION 65-40-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD REEL NO.

SIZE 1 3/8 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO. – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN			
2. DRILL ACTUAL	3		6 3/4
3. REAMING	5	4 1/2	1
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS		1	
7. LUBRICATE RIG			
8. REPAIR RIG		1 1/2	
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.			
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21. Misc		1	1/4
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.			
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
Frog Hunt	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD	2
CUMULATIVE ROTATING HRS.	18 1/4
TOTAL MUD COST	500.00

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	Teledrift	12.75	
1	STB RMR C/O OD	80	FT.
	D.C. ID OD		FT.
1	STB RMR C/O OD	3.45	FT.
1	D.C. ID 11" OD	29.48	FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	40.00	FT.
	TOTAL	86.	FT.
WT. OF STRING	52,000		LBS.

BIT RECORD

BIT NO.	1
SIZE	17 1/2
MFG.	Reed
TYPE	YTIAJ
JETS 1 32"	18 18 18
SER. NO.	786524
DEPTH OUT	
DEPTH IN	0
TOTAL FTG.	86
TOTAL HRS. RUN	18 1/2
COND. 1 8's T B GAGE	RR N
GPM PD-PSI	

MUD RECORD

TIME	0200	0500	0700
WEIGHT	88	91	93
PRESSURE GRADIENT			
VISC.-SEC.	38	61	160
PV-YP	/	/	17/43
GELS	/	/	14/38
WL-CC'S			12.4
pH			8.5
SOLIDS %			7.5

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	6300 LBS		
Bene X	16 LBS		

MORNING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.-S PAR.FL.-F COM.D-C
67	86	D			125	10	400	6 3/4	42			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0300	3		Drilling 17 1/2 Hole Very Rough
0300		5		Ream & Clean out Gravel for Correction
	0600			

DRILLER J. Hanson

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	Tele D.	12.75	
1	STB RMR C/O OD	80	FT.
	D.C. ID OD		FT.
1	STB RMR C/O OD	3.45	FT.
1	D.C. ID 11 OD	29.48	FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	40.06	FT.
	TOTAL	86.00	FT.
WT. OF STRING	53,200		LBS.

BIT RECORD

BIT NO.	1	2
SIZE	17 1/2	17 1/2
MFG.	Reed	Smith
TYPE	YTIAJ	V2-J
JET 1 32"	18 18 18	18 18 18
SER. NO.	786524	GA441
DEPTH OUT	86	
DEPTH IN	0	86
TOTAL FTG.	86	
TOTAL HRS. RUN	18 1/2	
COND. 1 8's T B GAGE	6 3 1	
GPM PD-PSI		

MUD RECORD

TIME	/		
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC			
PV YP	/	/	
GELS	/	/	
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel			
Bennex			
Lime			

DAY TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.-S PAR.FL.-F COM.D-C
86	86				90-100	10	400	6 3/4	50			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	0900	1		Trip Out For R.T #1 & Run B.T #2
0900	1030	1 1/2		Repair Air Leak on Rotary Jack Clutch
1030	1200	1 1/2		Ream Out & Clean For Connection
1200	1300	1		Rig Up Thompson Pump To Pump Cellar
				Conductor BBL. Leaking on Outside
1300	1600	3		Ream & Clean Out For Connection
				Pea Gravel & Boulders.

DRILLER L. Sandoval

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	150	FT.
1	TELEDRIFT	12.75	
1	STB RMR C/O OD	80	FT.
	D.C. ID OD		FT.
1	STB RMR C/O OD	3.45	FT.
23	D.C. ID 11" OD	29.04	FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	24.87	FT.
	TOTAL	100.00	FT.
WT. OF STRING	56,000		LBS.

BIT RECORD

BIT NO.	2	
SIZE	17 1/2	
MFG.	Smith	
TYPE	V2-J	
JETS 1 32"	18 18 18	
SER. NO.	GA441	
DEPTH OUT	100	
DEPTH IN	86	
TOTAL FTG.	14	
TOTAL HRS. RUN	6 3/4	
COND. 1 8's T B GAGE		
GPM PD-PSI		

MUD RECORD

TIME	6		
WEIGHT			
PRESSURE GRADIENT			
VISC.-SEC			
PV YP			
GELS			
WL -CC'S			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel			
Bx			

EVENING TOUR

FOOTAGE FROM	FOOTAGE TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SCL.-S PAR.FL.-F COM.D-C
86	100	D			90/140	0/15	400	6 3/4	50			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
86	1/2							

TIME LOG FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1615	1/4		Survey.
1615	2030	4 1/4		Drill 17 1/2" Hole
2030	2130	1		Ream & Clean Tight Hole
2130	2400	2 1/2		Drill

DRILLER Ken Ingerson

Form 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 2

LEASE: Cranswick | WELL NO.: A-1 | API WELL NUMBER: 50-[illegible]-131-[illegible] | DATE: 2 X 72

OPERATOR: Amoco | CONTRACTOR: Peter Bawden Drilling | RIG NO.: 31

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Starstairs | SIGNATURE OF CONTRACTOR'S TOOL PUSH: Tom Lemming Jam

D.P. SIZE	WT. PER FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6 3/4	4 1/2 IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D-[illegible]	17
2	National	11 P-80	12

LEGAL LAND DESCRIPTION: [illegible] 40 13[illegible] [illegible]

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.
SIZE 1 3/16 | NO. LINES 10 | FT. SLIPPED
FT. CUT OFF | PRESENT LENGTH
TON MI. OR TRIPS SINCE LAST CUT
CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION — HOURS

CODE NO.	OPERATION	MORN.	DAY	EVE.
1	RIG UP AND TEAR DOWN			
2	DRILL ACTUAL			7 1/4
3	REAMING			
4	CORING			
5	CONDITION MUD & CIRCULATE			
6	TRIPS			
7	LUBRICATE RIG			
8	REPAIR RIG			
9	CUT OFF DRILLING LINE			
10	DEVIATION SURVEY			
11	WIRE LINE LOGS			
12	RUN CASING & CEMENT	1/2		
13	WAIT ON CEMENT		8	1/2
14	NIPPLE UP B.O.P.			
15	TEST B.O.P.			
16	DRILL STEM TEST			
17	PLUG BACK			
18	SQUEEZE CEME[illegible]			
19	FISHING			
20	DIR. WORK			1/4
21	R[illegible]			7 1/2
22				
23				
COMPLETION	A. PERF'R'T'N			
	B. TBG TRIPS			
	C. TREATING			
	D. SWABBING			
	E. TESTING			
	F. ADDIT'N'L			
	G.			
TOTALS		1		8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. W/O D.P.			
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

NO. OF DAYS FROM SPUD: 1
CUMULATIVE ROTATING HRS.: 8 1/4
TOTAL MUD COST

DRILLING ASSEMBLY (At end of tour)

NO.			FT.
1	BIT		150 FT.
1	[illegible]		12.75
1	STB RMR	OD .80	FT.
	D.C. ID	OD	FT.
1	STB RMR	OD 345	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	36 50	FT.
	TOTAL	55	FT.

WT. OF STRING 20 000 LBS.

BIT RECORD

BIT NO.	1
SIZE	17 1/2
MFG.	REED
TYPE	YT-A-J
JETS 1 32"	18 18 18
SER. NO.	786524
DEPTH OUT	55
DEPTH IN	0
TOTAL FTG.	55
TOTAL HRS. RUN	1
COND. 1 8's T B GAGE	1 1 1
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC-SEC.			
PV YP			
GELS			
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	400 lbs		

MORNING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL. S PAR. FL-P COM. D-C
55												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0001	0730	7 1/2		[illegible]
0730	0800	1/2		[illegible]
				CEMENT PLUG 137 SXS PERMA-FROST CEMENT
				SLURRY WT - 14.5 - 16.5 LB/GAL
				WATER TEMP - 50°F
				PLUG DOWN AT 0745 A.M.

DRILLER: Neil Speers

NO. 2 DRILLING ASSEMBLY (At end of tour)

NO.			FT.
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.

WT. OF STRING LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JET 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG	
TOTAL HRS. RUN	
COND. 1 8's T B GAGE	
GPM. PD-PSI	

MUD RECORD

TIME			
WEIGHT			
PRESSURE GRADIENT			
VISC-SEC.			
PV YP			
GELS			
WL-CC'S.			
pH			
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DAY TOUR

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL. S PAR. FL-P COM. D-C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0700	1600			WAIT on CEMENT. (TEAR OUT Halbut)
				Clean Cellar Out, Cement Cribbing
				Change First Joint on Flare Line
				(Valve + Lay 9 5/8 Flare Line
				(Move Thompson Quad To Cellar)

DRILLER: [illegible]

NO. 3 DRILLING ASSEMBLY (At end of tour)

NO.			FT.
1	BIT		150 FT.
1	TELEDRIFT		1215
1	STB RMR	OD	FT.
3	D.C. ID 11"	OD	2948 FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
3	C/O		80
1	C/O		345
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		2000 FT.
	TOTAL		6798 FT.

WT. OF STRING 42 M LBS.

BIT RECORD

BIT NO.	1
SIZE	17 1/2
MFG.	REED
TYPE	YT-A-J
JETS 1 32"	18 18 18
SER. NO.	786524
DEPTH OUT	—
DEPTH IN	0
TOTAL FTG.	67
TOTAL HRS. RUN	8 1/2
COND. 1 8's T B GAGE	RUN
GPM. PD-PSI	

MUD RECORD — Time

TIME			2015
WEIGHT			8.8
PRESSURE GRADIENT			
VISC-SEC.			60
PV YP			
GELS			
WL-CC'S.			13.5
pH			9.0
SOLIDS %			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	4000	LBS	
DEXTRID	225	LBS	
LIGNOSULFONATE	300	LBS	

EVENING TOUR

FOOTAGE / FORMATION

FROM	TO	DR.D RM.R CORE.C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.	METHOD RUN SGL. S PAR. FL-P COM. D-C
55	67	D			155/10	45	1450	6 1/2	45			

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
55	3/4	X						

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600	1630	1/2		RIG TO SPUD / SPUD in @ 1630
1630	2000	3 3/4		DRILL 17 1/2" HOLE (VERY ROUGH)
2000	2015	1/4		SURVEY
2015	2400	3 3/4		DRILL (VERY ROUGH)

DRILLER: [illegible]

FORM 3T5 — APPROVED — APPROVED

A.A.O.D.C.--A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 1

LEASE	WELL NO.	API WELL NUMBER	DATE
Cranswick	A-1	05-040-131-45	01-25-72

OPERATOR	CONTRACTOR	RIG NO.
Amoco	Peter Sanden Drilling	21

SIGNATURE OF OPERATOR'S REPRESENTATIVE: C. Caritans

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Tom Flemming Jon

D.P. SIZE	WT./FT.	GRADE	TOOL JT O.D.	TYPE THREAD	STRING NO.
5	19.5	E	6¼	4½ IF	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D 1000	18
2	National	H 850	16

LEGAL LAND DESCRIPTION: 05-040-131-45

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT

WIRE LINE RECORD — REEL NO.

SIZE 3/19 | NO. LINES 10 | FT. SLIPPED

FT. CUT OFF | PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

TIME DISTRIBUTION – HOURS

CODE NO – OPERATION	MORN.	DAY	EVE.
1. RIG UP AND TEAR DOWN	2½	8	
2. DRILL ACTUAL	1		
3. REAMING			
4. CORING			
5. CONDITION MUD & CIRCULATE			
6. TRIPS			
7. LUBRICATE RIG			
8. REPAIR RIG			
9. CUT OFF DRILLING LINE			
10. DEVIATION SURVEY			
11. WIRE LINE LOGS			
12. RUN CASING & CEMENT			
13. WAIT ON CEMENT			
14. NIPPLE UP B.O.P.	4		
15. TEST B.O.P.			
16. DRILL STEM TEST			
17. PLUG BACK			
18. SQUEEZE CEMENT			
19. FISHING			
20. DIR. WORK			
21.	½		8
22.			
23.			
COMPLETION A. PERF'R'T'N			
B. TBG TRIPS			
C. TREATING			
D. SWABBING			
E. TESTING			
F. ADDIT'N'L			
G.			
TOTALS	8	8	8

DAY WORK TIME SUMMARY (OFFICE USE ONLY)

HRS. W/CONTR. D.P.	8	8	8
HRS. W/OPR. D.P.			
HRS. WO. D.P.	16		
HRS. STANDBY			
Boiler	8	8	8
Camp	8	8	8
TOTAL DAY WORK	8	8	8

TOTAL MUD COST

MORNING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD

BIT NO.	
SIZE	
MFG.	
TYPE	
JETS 1 32"	
SER. NO.	
DEPTH OUT	
DEPTH IN	
TOTAL FTG.	
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	0700
WEIGHT	8.3
PRESSURE GRADIENT	—
VISC.-SEC.	33
PV YP	7 / 1
GELS	7 / 1
WL-CCS	—
pH	—
SOLIDS%	—

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
G&L	2 Ton		
Caustic	100 LBS		

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C
0												

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0301	0800	4		Work on pumps, Mix mud, Rig Cellar, Pump Fuel, Balance Tongs + Rig Tong Lines

DRILLER Dale Hebbink

DAY TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
1	BIT	1.50	FT.
1	Tel-Drift	12.75	
1	STB RMR 10 OD	80	FT.
	D.C. ID OD		FT.
1	STB RMR 10 OD	3.45	FT.
	D.C. ID 10 OD		FT.
	STB RMR OD		FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN	36.30	FT.
	TOTAL	55	FT.
	WT. OF STRING	20,300	LBS.

BIT RECORD

BIT NO.	#1
SIZE	17½
MFG.	Reed
TYPE	ATIA-J
JET 1/32"	18 18 18
SER. NO.	786524
DEPTH OUT	55
DEPTH IN	0
TOTAL FTG.	55
TOTAL HRS. RUN	1
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC.-SEC.	
PV YP	
GELS	
WL-CCS	
pH	
SOLIDS%	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C
0	55	0	-	—	50	5	400	6¾	60			S

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0800	1200	4		Dig Cellar + Cut Conductor, Install 5" Flare Line Valve + 3" Flare Line Valve
1200	1430	2½		Rig To Spud, Spudded @ 1430 hrs
1430	1530	1		Drilling 17½ Hole
1530	1600	½		Conductor pipe washed out. Blow Kelly + mud Lines
				(1.00 DIF) @ 1430 VAT, K B To Ground = 21.80

DRILLER J. Simmons

EVENING TOUR

DRILLING ASSEMBLY (At end of tour)

NO.			
	BIT		FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	D.C. ID	OD	FT.
	STB RMR	OD	FT.
	STANDS DP		FT.
	SINGLES DP		FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD

BIT NO.	#1
SIZE	± 17½
MFG.	REED
TYPE	YTIA-J
JETS 1-32"	18 18 18
SER. NO.	786524
DEPTH OUT	55
DEPTH IN	0
TOTAL FTG.	55
TOTAL HRS. RUN	
COND. 1/8's T B GAGE	
GPM PD-PSI	

MUD RECORD

TIME	
WEIGHT	
PRESSURE GRADIENT	
VISC-SEC.	
PV YP	
GELS	
WL-CC's	
BIT	
SOLIDS%	

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1000 ±		
Dextrid	35		
Lignite	300		

FOOTAGE

FROM	TO	DR..D RM..R CORE..C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	PUMP NO. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL..S PAR'EL..P COM'D..C

DEVIATION RECORD

DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION

TIME LOG

FROM	TO	ELAPSED TIME	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1600				Haul Cement unit to Rig. Hook up to Heat Duct & Herman Nelson to warm up, To Receright Conductor Pipe, Bail Out Cellar, Haul over Cement & Gel
	2400	8		

DRILLER J. Simmons

FOR

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