DECALTA LRI ET AL

KEELE RIVER

1-01

Drilling Authority No. L60

Date Issued 27 November 1970

WELL NAME Decalta LRI et al Keele River I-01

FIELD

Area:

LOCATION: Unit I Section 01 Grid 64-30-125-00

Latitude 64-20-40.05 Longitude 125-00-07.34

U.W.L.R. 64.34445 --- 125.00203

U.W.I. 300I016430125000

Rig Release Date:

Status

Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
27-11-70	Application for a Drilling Authority.
21-4-71	Well Completion Data.
	Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
14/1/71	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well.
	Well History Supplement.
	Well Completion Data.
	Work-over Report No. .....
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells – Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells – Vitter's Method.
	M.P.R. – Oil – Calculations.
	New Oil Well Report.
	New Gas Well Report.
26/5/71	Site Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale..... Small scale.....

IAND 52-90 (3-69)

File No. .....
Drilling Authority No. 100.....

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

OIL AND MINERAL DIVISION

WELL-SITE INSPECTION REPORT

FROM: Field Office or Area: [illegible] Date: May 26, 1971

TO: The Oil Conservation Engineer:

RE: Decalta LRI et al Keele River I-01

Location: 64°39'49.05"; 125°00'07.34"; Status: Abandoned

This location was inspected by the undersigned on May 19, 1971

The location is in ~~satisfactory~~/unsatisfactory condition.

The following items require attention:

1. Drum, pipe, quart oil cans, plastic sheet, mud, bags of sawdust, wire mesh pipe,
2. batteries, should all be buried.
3.
4.
5.
6.

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

Token attempt to satisy forestry requirement, but little or no clean up done at well site.

Spudded: December 3, 1970
Released Rig: January 4, 1971

Inspected by [signature]

Original to Oil Conservation Engineer, Dept of IA & ND. Duplicate to Field Office or Inspecting Engineer.
IAND 52-99-14 (9-69)

(Amended)

Drilling Authority No. 460

Date Issued November 27, 1970

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

LAND 52-90 (2) (3-70)

APR 23 1971

WELL COMPLETION DATA

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.

Well name and number: Decalta LRI et al Keele River I-01

Permit No. 5424 Lease No. -

Total Petroleums (N.A.) Ltd. (Permittee, Licensee, Lessee) Exploratory Licence No. 1677

Western Decalta Petroleum Limited (Operator) Exploratory Licence No. 1696

Location: Unit I Section 01 Grid 64° 30'N; 125° 00'W

Latitude 64° 20' 40.05"N Longitude 125° 00' 07.34"W

Unique well identifier 3001016430125000

Universal Well Location Reference Lat. 64.34445°N, 125.00203°W

	DATE	DEPTH
Spudded	12/3/70	
Suspended		
Resumed Operations		
Finished Drilling	1/4/71	5600 (Driller) 5595 (Logger)
Deepened		
Complete (gas/oil)		
Abandoned	1/9/71	5600
Rig released	1/9/71	5600

Pool(s)

Interval(s) open to production

Elevation: Gr. 933.7 K.B. 951

Rig No. 9

Drilling Contractor Jenning

Contractor's Business Licence No. 770

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1. 8-5/8"	K-55	24	566'	547.9'	300 sacks + 3% $CaCl_2$
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION Depths	ELEVATION Sub-Sea
Cretaceous Sand Series	1962	-1011
Cretaceous Shale	3012	-2061
Basal Cretaceous Sand	3612	-2661
Hume	3675	-2724
Bear Rock	4160	-3209
Ronning	5212	-4261
Total Depth	5595	-4644

CORE RECORD

From	To	Rec.	From	To	Rec.
N/A					

LOG RECORD

Run No.	Type of Log	From	To
1	Dual Induction Laterolog	549	5593
1	BHCS/GR	549	5593
1	SNP	3500	5594
1	Formation Density Log	3500	5595

CEMENTING RE RD (Plug, Squeeze, etc.)			
Date	From	To	Remarks
1/7/71	5200	5000	80 sacks
1/7/71	4200	4100	75 sacks; felt @ 4025'
1/8/71	3800	3600	145 sacks; felt @ 3610'
1/9/71	600	500	80 sacks; felt @ 470'.
1/9/71	surface		7 sacks; cut off casing, capped and marked.

PERFORATING RECORD (Bullet, Jet)			
Date	From	To	Remarks
			N/A

SERVICING RECORD (Acidizing, Fracing, etc.)			
Date	From	To	Remarks
			N/A

DRILL STEM TESTS (Pressures reported are office figures).

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.B.H.P.	F.S.I.B.H.P.	I.F.B.H.P.	F.F.B.H.P.	I.H.P.	F.H.P.	REMARKS
1.	12/19/70	Cret.	3614	3680	60	24	54	1289	1267	78	157	1769	1766	120' salt water cut mud.
2.	12/22/70	Hume	3684	3843	61	27	59	1393	1317	49	146	1805	1802	264' mud.
3.	12/26/70	Bear Rock	4165	4220	62	23	58	1596	1480	101	281	2087	2087	264' mud; 258' gas and mud cut salt water.
4.	1/6/71	Bear Rock Ronning	4987	5600	66	20	60	1940	1733	108	140	2687	2688	90' mud.

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
Core Labs.					
CAL-2-3409	#1	3614	3680	DST #1	Water Analysis
CAL-2-3414	#2	3684	3843	DST #2	" "
CAL-2-3414	#3	[illegible]	4220	DST #3	" "
933-1[illegible]	#4	[illegible]	5600	DST #4	Mud Filtrate
933-1107		4987	5600	DST #4	" "

PRESENT STATUS OF WELL

Oil		(Interval.)
Gas		(Interval.)
Dry	X	
Susp.		

Company WESTERN DECALTA PETROLEUM LIMITED

Signed by [illegible]

Title Chief Engineer

Date April 21, 1971

Forms to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.

File No.
Drilling Authority No. 460

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well ~~or Suspend Drilling~~

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

Name and number of well: Decalta LRI et al Keele River I-01

Location: Unit: I Section: 01 Grid: 64° 30' N, 125° 00' W

Latitude: 64° 20' 40.05" Longitude: 125° 00' 07.34"

From Established Reference Marker

Universal Well Location Reference: Lat. 64.34445° N, Long. 125.00203° W

Permit No. 5424 Lease No. -

Total Petroleum (North America) Ltd.
(Permittee, Licensee, Lessee)

Date of commencement of proposed program: January 6, 1971

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at -
Gas at 4165-4220'
Water at 3614' - 3680'; 4165' - 4220'
Total Depth 5500' Date of last operations January 8, 1971
Present condition of well Drilling at 5511' in Boaning

CASING RECORD

	Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1.	8-5/8"	24#	560	547	300 + 3% $CaCl_2$	-
2.						
3.						
4.						
5.						

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	4100' - 4200'	Bear Rock	75 sks	Feel after 8 hours
2	3600' - 3800'	Basal Cretaceous/Hume	125 "	Feel after 8 hours
3	500' - 600'	Surface casing	50 "	Feel after 8 hours
4	Top surface casing	Surface casing	5 "	Weld 5' riser on top casing after 5 sack plug. Cap with steel plate and weld name of well on plate.

The following logs have been run: DIL, Sonic/GR/Caliper, Density SNP

Other operations proposed: Log and abandon

Operations to be carried out by: Western Decalta Petroleum Limited Contractor Licence No. 770

Address: 630 - 6th Avenue S.W., Calgary Address

Responsible Agent in field: W. G. Tyler

Dated at Calgary, this 4th Day of January 1971

Signed by [signature] Company Western Decalta Petroleum Limited

Title: Chief Engineer Operator's Exploratory Licence No. 1696

Note:—The Oil 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. B.H.J. Thoms on the 4th January 1971.

Dated 14th January, 19 71

B. H. J. Thoms
Oil Conservation Engineer

IAND 52-90 (5) (2-69)

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

Location Plan Approved

Drilling Authority No. 460

Project No.

File No.

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

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: Decalta LRI et al Keele River I-01

Location: Unit 1 Section 0 1 Grid 64° 30' N; 125.00' W

Latitude 64° 20' 40.05" Longitude 125.00' 07.34"

Unique Well Identifier 300I016430125000

~~Universal Well Location Reference Lat. 64.34445° N., Long. 125.00203° W.~~

Elevation: Ground 933.7 K.B. 946 feet above sea-level.

Well is expected to produce from Exploratory formation at a depth of about feet. Expected total final depth 5600

Area assigned to well

(for Oil Conservation Engineer's use only)

Permit No. 5424 Lease No. - Acreage 27,667

Permittee, licensee, or lessee French Petroleum Company

Exploratory Licence No. 1677

Surface owned by Crown or Crown

(If allocated 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. 8-5/8	24	J-55	New	550	400
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment

Cameron & Hydril BOP's.

Well will be drilled with Rotary Rig No. 9 by Jennings (Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No. 770

At well At registered office W. G. Tyler

Address Address 630 - 6th Avenue S.W., Calgary, Alta.

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

Dated at Calgary, this 23rd day of November 19 70

Signed by [signature] Company WESTERN DECALTA PETROLEUM LIMITED

Title Chief Engineer Operator's Licence No. 1696

(For Oil and Mineral Division use only)

APPROVED

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

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

Dated 27th November 19 70 Please see over page.
Oil Conservation Engineer

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

IAND 52-90-1 (3-69)

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. Production and Intermediate Casing strings are to receive the approval of the Oil Conservation Engineer before running.

B.H.J. Thoms

B.H.J. Thoms, Oil Conservation Engineer

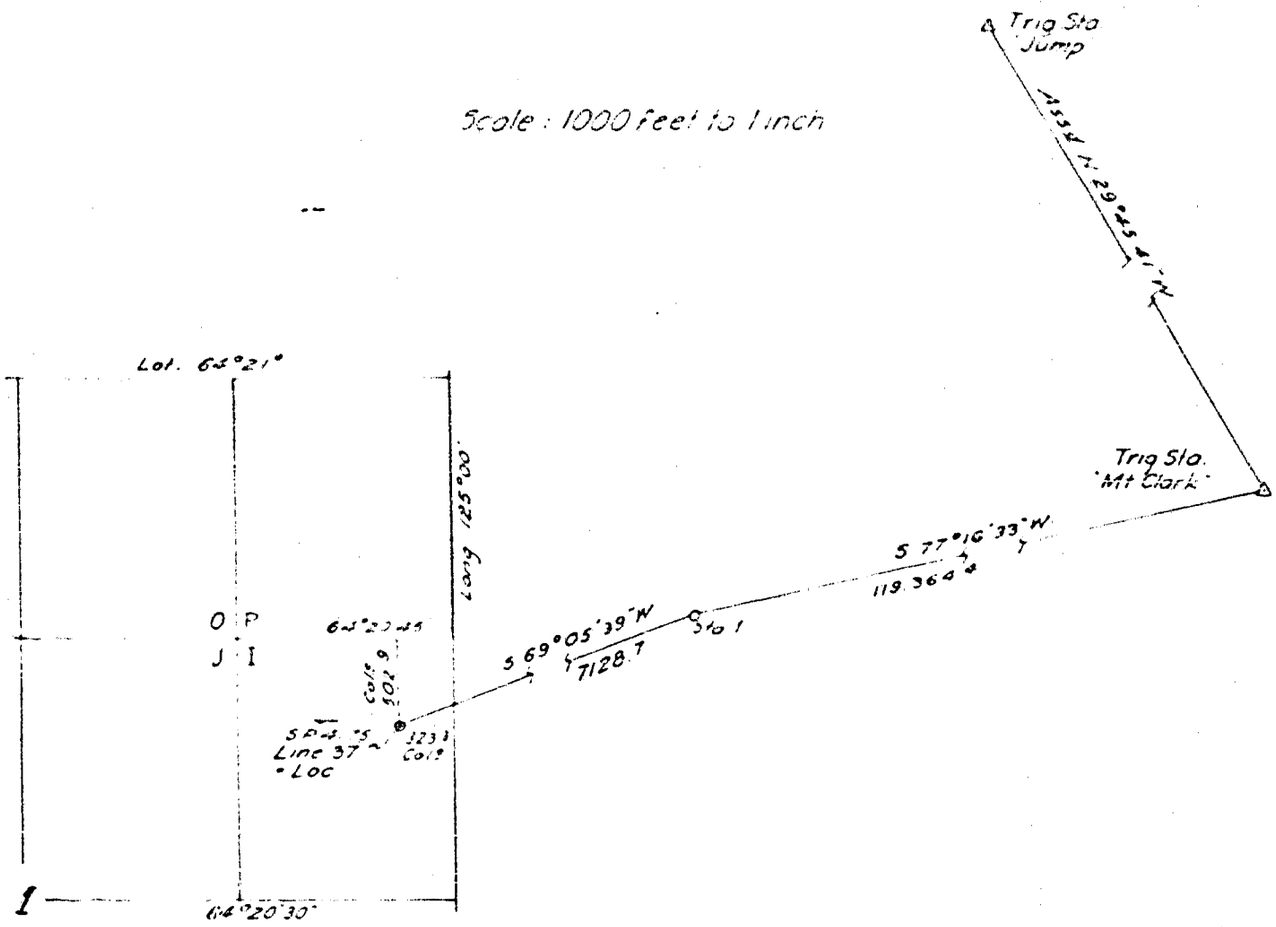
LUCILLA LRI ETAL KELLER

I I 64° 30', 125° 00'

Latitude 64° 20' 40.05" Longitude 125° 00' 07.34"

Northwest Territories

Scale : 1000 feet to 1 inch



CO-ORDINATE TABLE				
CUTM Values	Scale Factor 0.99996		Ref Mer. 126°00'	
STATION	BEARING	DISTANCE	NORTH	EAST
Geod Trig Sta MT CLARK			23,446,564.16	281,312.78
	S 77°16' 33" W.	119,364.4		
Sta. 1			23,420,273.25	164,879.80
	S 69°05' 39" W.	7,128.70		
S.P.4175 - Loc.			23,417,729.43	158,220.40

NOTE:
1 Well is located 259.1 North, 296' East } of center Unit I.
2. Distances are in feet and decimals and are obtained by Tellurometer measurement
3. Survey originates from Trig Sta. Mt Clark - assumed location 64° 24' 57.325" N. Lat. 124° 13' 15.264" W. Long. (Shell Canada Limited)

Survey completed 28th day of August A.D. 1970.
Certified correct.

D. R. Sandber
Alberta Land Surveyor

WESTERN DECALTA PETROLEUM LIMITED

ELEVATION: 933.7 Ground

DATUM: Geod. Trig Sta. MT. CLARK
Elev. 4798

Prepared by:
MIDWEST SURVEYS CO. LTD.

C 371 - 70

DECALTA L.R.I. ET AL KEELE RIVER I-1

GEOLOGICAL PROGNOSIS

Grd. 933.7
K.B. 945

	Depth	Elev.
Cretaceous sand series (Upper)	2100	-1155
Cretaceous shale	3000	-2055
Basal Cretaceous sand	3660	-2715
Hume	3730	-2785
Bear Rock	4080	-3135
Ronning	5080	-4135
T.D.	5600	4655

Note

1) Anhydrite can be expected in the Bear Rock formation.

2) There is a possibility of lost circulation from the top of the Hume through to the top of the Ronning.

Reports

All reports will be made to Western Decalta Petroleum, Calgary and will be distributed from there.

Samples

10 foot samples will be caught from grass roots to T.D.

Two washed sets of samples will be bottled at the rig - one for the use at the rig and to be retained by Decalta and the other set for Total Petroleum. The remainder of the sample will be forwarded to the G.S.C. in Calgary.

ENGINEERING REPORT
ON
DECALTA LRI ET AL KEELE RIVER I-01
(Latitude 64° 20' 40.05")
(Longitude 125° 00' 07.34")

JANUARY, 1971

19-11-5

ENGINEERING REPORT

ON

DECALTA LRI ET AL KEELE RIVER I-01

(Latitude 64° 20' 40.05")
(Longitude 125° 00' 07.34")

OIL & GAS OPERATIONS UNIT
Oil and Mineral Division
JUL 19 1971
OTTAWA CANADA
Dept. of Indian Affairs & Northern Development

SUBMITTED BY: D. A. Crawford
Field Engineer

APPROVED BY: W. G. Tyler
Chief Engineer

(NOTE: Where discrepancies exist between this and other reports, data of this report supersedes all other information.)

WELL HISTORY REPORT

DECALTA LEI ET AL KEELE RIVER I-01

INDEX

SECTION I - SUMMARY OF WELL DATA

SECTION II - GEOLOGICAL SUMMARY
- a) Formation Tops
- b) Cored Intervals - Nil
- c) Core Description - Nil
- d) Sample Description
- e) Paleontological Determinations - Nil
- f) Strip Log

SECTION III - ENGINEERING SUMMARY
- a) Report of Drill Stem Tests
- b) Casing Report
- c) Bit Record
- d) Mud Report
- e) Deviation Summary
- f) Abandonment Plugs
- g) Lost Circulation Zones - Nil
- h) Report of Blowouts - Nil

SECTION IV - LOGS

SECTION V - ANALYSIS
- a) Core Analysis - Nil
- b) Water Analysis
- c) Gas Analysis - Nil
- d) Oil Analysis - Nil

SECTION VI - COMPLETION SUMMARY

Not Applicable

SECTION I

SECTION I

SUMMARY OF WELL DATA

a)	NAME:	DECALTA LRI et al KEELE RIVER I-01
b)	PERMITTEE:	Total Petroleum (North America) Ltd.
c)	OPERATOR:	Western Decalta Petroleum Limited 630 - 6th Avenue S.W. Calgary 1, Alberta
d)	LOCATION:	Unit I, Section 01, Grid 64° 30'N; 125° 00'W Latitude: 64° 20' 40.05"; Longitude: 125° 00' 07.34" Unique Well Identifier: 300I016430125000 Universal Well Location Reference: Lat. 64.34445°N Long. 125.00203°W
e)	CO-ORDINATES:	Well Located 259.1' North) of centre of Unit I 296.1' East)
f)	PERMIT NUMBER:	524
g)	DRILLING CONTRACTOR:	Jennings International Drilling Rig No. 9 Rig Type: Emsco GA 500
h)	DRILLING AUTHORITY:	No. 460 Date: November 27, 1970
i)	CLASSIFICATION:	New Field Wildcat
j)	ELEVATIONS:	Ground Level 933.7 Kelly Bushing 951
k)	SPUD DATE:	December 3, 1970
l)	DRILLING COMPLETED:	January 4, 1971
m)	TOTAL DEPTH:	5600' (Driller) 5595' (Logger)
n)	STATUS:	Abandoned
o)	RIG RELEASE:	January 9, 1971
p)	HOLE SIZES:	12-1/4" - 0' to 549' K.B. 7-7/8" - 549' to 5600' K.B.
q)	CASING:	Surface: 8-5/8", 24#, K-55, landed @ 547.9' K.B. Cemented with 300 sacks construction + 3% $CaCl_2$.

SECTION II

SECTION II

GEOLOGICAL SUMMARY

a) Formation Tops

FORMATION	DEPTH BY PROGNOSIS	DEPTH BY SAMPLE	DEPTH BY E-LOG	ELEVATION BY E-LOG
Cretaceous Sand Series	2100	1955	1962	-1011
Cretaceous Shale	3000	2970	3012	-2061
Basal Cretaceous Sand	3660	3616	3612	-2661
Hume	3730	3680	3675	-2724
Bear Rock	4080	4149	4160	-3209
Ronning	5080	4790	5212	-4261
Total Depth	5600		5595	-4644

SECTION II

DECALTA LRI ET AL KEELE RIVER I-01

d) SAMPLE DESCRIPTIONS

Surface - 20	(Glacial drift) limestone - cream to buff, cryptograined; sandgrains - varicoloured, fine grained, quartzose, bentonite
20 - 30	Coal - black, medium hard, low lustre, subconcoidal fracture
30 - 140	Very poor sample (Bentonite - light grey, trace of coal - black, fibrous)
140 - 160	Sand grains - varicoloured, medium grained, quartz sub-rounded; coal - black, fibrous
160 - 170	Sand grains - varicoloured, fine to medium grained, quartz sub-rounded, limestone rounded; coal - black fibrous
170 - 190	Sandstone - light grey (salt & pepper), medium hard, fine grained grading to silt, quartzose (sub-rounded), chert (sub-angular), very kaolinitic; shale - grey, medium hard, silty in part
190 - 230	Sandstone - light grey (salt & pepper), medium hard, medium grained grading to silt, very kaolinitic, slightly calcareous, in part, slightly pyritic, micaeous in part
230 - 260	Siltstone - light grey, medium hard, micromicaeous in part; grading to sandstone - light grey (salt & Pepper), silty to medium grained, medium hard, composed of 40% quartz (sub-rounded), 40% chert (sub-rounded) and 20% kaolinite matrix, micaeous, slightly pyritic
260 - 310	Shale - grey, medium hard, silty in part, micaeous in part, carbonaceous partings in part; sandstone - light grey, silty to fine grained, salt & pepper, quartzose, grains (sub-rounded), chert (grains sub-angular), very kaolinitic, micaeous
310 - 330	Siltstone - light grey, medium hard, micaeous and very kaolinitic, some carbonaceous partings; sandstone - light to dark grey, medium hard, silty to fine grained, quartzose (rounded) grains, chert (sub-rounded) grains, micaeous, very kaolintic
330 - 340	Shale - grey to dark grey, medium hard, micromicaeous

340 - 360	Sandstone - light grey to grey, medium hard, fine grained to very fine grained, salt & pepper, quartzose (sub-rounded), chert (rounded), very kaolinitic, calcareous in part; Siltstone - light grey to grey, medium hard, micromicaeous in part, carbonaceous partings in part
360 - 380	Siltstone - light grey to grey, medium hard, micaeous, shaly in part; sandstone - light to dark grey, medium hard, silty to fine grained, quartz (sub-rounded grains), chert and obsidian (rounded to angular grains), kaolinitic, calcareous in part
380 - 390	Very poor sample
390 - 410	Shale - light grey, bentonitic, poor sample
410 - 420	Siltstone - light grey to grey, medium hard, micromicaeous, shale - light grey, bentonitic
420 - 450	Shale - light grey, bentonitic
450 - 470	Siltstone - light grey, medium hard, micaeous; sandstone - light grey to grey, medium hard, fine grained to silty, quartz (sub-rounded), chert grains (sub-rounded), kaolinitic micaeous
470 - 480	Shale - light grey, bentonitic
480 - 540	Shale - light grey to grey, medium hard, silty in part; sandstone - light grey to grey, medium hard, fine grained grading to silt, quartzose (sub-rounded grains), chert (sub-rounded grains to angular), kaolinitic, micaeous, carbonaceous partings
540 - 552	Very poor sample - siltstone - grey to dark grey, medium hard, micaeous, sandy in part, pyrite
552 - 740	Shale - grey to dark grey, medium hard to soft, bentonitic, micromicaeous in part, poor sample
740 - 750	Shale - light grey, medium hard, micromicaeous, pyritic
750 - 920	Shale - light to dark grey, medium hard to soft, micromicaeous, bentonitic in part
920 - 940	Shale - grey, medium hard, micaeous, silty in part
940 - 1050	Shale - grey to dark grey, medium hard, micromicaeous

1050 - 1080	Shale - grey to dark grey, medium hard, micromicaeous, silty in part
1080 - 1100	Shale - grey to dark grey, medium hard, micromicaeous
1100 - 1140	Shale - grey to dark grey, medium hard, micromicaeous, silty in part
1140 - 1240	Shale - light to dark grey, medium hard, micromicaeous
1240 - 1250	Shale - light to dark grey, medium hard, micromicaeous, pyritic
1250 - 1540	Shale - light to dark grey, medium hard, micromicaeous
1540 - 1630	Shale - light grey, medium hard, micaeous, slightly calcareous, Shale - grey to dark grey, micromicaeous, pyritic, fossils?
1630 - 1660	Sandstone - grey, medium hard, fine grained grading to silt, quartzose (sub-rounded grains), chert (rounded grains), calcareous, poorly sorted, no visible porosity, much pyrite, floating chert pebbles, medium grained
1660 - 1690	Siltstone - grey to dark grey, medium hard, pyritic, micaeous, calcareous; grading to sandstone - grey to dark grey, medium hard, fine grained to silt, quartzose (sub-rounded grains), chert (rounded grains), calcareous, no visible porosity, much pyrite, floating chert pebbles
1690 - 1730	Siltstone - grey and grey brown, medium hard, micaeous; grading to sandstone - grey, medium hard, fine grained to silt, quartzose (sub-rounded grains), unsorted, clay matrix, micaeous, pyritic, calcareous in part, trace of glauconite; trace of floating chert pebbles
1730 - 1790	Siltstone - grey to dark grey, medium hard, micaeous, pyritic; grading to sandstone - grey, medium hard, fine grained to silty, quartzose (sub-rounded grains),chert (sub-rounded grains), clay matrix, unsorted, micaeous, pyritic, calcareous in part; trace of shale - apple green, medium hard, micaeous, slightly calcareous, trace of floating chert pebbles
1790 - 1820	Siltstone - grey, medium hard, micaeous, pyritic; grading to sandstone - grey, medium hard, fine grained to silty, quartzose (sub-rounded grains), chert (sub-rounded grains), unsorted, clay matrix, micaeous, pyritic, slightly calcareous, samples not lagged

1820 - 1910	Siltstone - grey, medium hard, micaeous, pyritic; grading to sandstone - grey, medium hard, fine grained to silty, quartzose (sub-rounded grains), chert (sub-rounded grains), unsorted, clay matrix, micaeous, pyritic, sightly calcareous, shale - apple green, medium hard, pyritic, floating chert pebbles
1910 - 1920	Siltstone - grey, medium hard, pyritic, micaeous, sandy; trace of limestone - white, medium hard crypto grained; trace shale - white to apple green, pyritic, slightly calcareous, trace of floating chert pebbles
1920 - 1930	Siltstone - grey, medium hard, pyritic, micaeous; grading to sandstone - light grey to grey, medium hard, fine grained to silt, quartzose (sub-rounded grains), chert (sub-rounded), unsorted, pyritic; trace sandstone - white, fine grained, soft, quartzose (sub-rounded) poor intergranular porosity, no fluorescence; some siderite, trace of floating chert pebbles
1930 - 1970	Siltstone - light grey to grey, medium hard, micaeous; grading to sandstone - white to grey (salt & pepper), fine grained grading to silt, quartzose (sub-rounded grains), chert (sub-rounded grains), fair sorting, clay matrix in part, calcareous in part, pyritic; floating chert grains, coarse, black, brown and grey

<u>Cretaceous Sand Series 1962 (-1011)</u>

1970 - 1980	Chert floating pebbles, varicoloured, coarse
1980 - 2000	Chert (floating pebbles), varicoloured, coarse; sandstone - light grey, medium hard, fine grained, fairly well sorted, quartzose (sub-angular grains), chert (sub-rounded), trace of intergranular porosity, no fluorescence
2000 - 2020	Sandstone - light grey, medium hard, fine grained, fairly well sorted, quartzose (sub-angular), chert (sub-rounded), trace of intergranular porosity, no fluorescence; floating chert grains, Unlagged to 2000' Lagged at 1 min. per 100'
2020 - 2040	Siltstone - grey, medium hard, pyritic; floating chert grains - varicoloured, coarse
2040 - 2050	Coal - black, medium hard, good lustre in part, shaly in part; Sandstone - grey, medium hard, fine grained grading to silt, argillaceous, quartzose (sub-rounded grains), chert (rounded grains), poorly sorted; floating chert grains - varicoloured, medium to coarse grained

2050 - 2080	Sandstone - light grey (salt & pepper), medium hard to soft, fine to medium grained, fair sorting, quartzose (sub-angular grains), chert (sub-rounded grains), poor intergranular porosity, no fluorescence; trace of coal-black, medium hard, good lustre, no fluorescence
2080 - 2100	Sandstone - grey, medium hard, fine grained grading to silt, poorly sorted, quartzose (sub-angular grains), chert (sub-rounded grains), argillaceous, pyritic; sale - brown, medium hard, sandy (glauconite grains)
2100 - 2130	Sandstone - light grey (salt & pepper), medium hard, fine grained, fair sorting, quartzose (sub-rounded grains), chert (rounded), slightly argillaceous in part, trace of poor intergranular porosity, no fluorescence; sandstone - brown, medium hard, fine grained, glauconite with a siderite matrix
2130 - 2150	Sandstone - light grey (salt & pepper), medium hard, fine grained, fair sorting, quartzose (sub-rounded grains), chert (rounded grains), slightly argillaceous, some siderite cement, trace of glauconite, no porosity
2150 - 2160	Sandstone - light grey to grey, medium hard, fine grained grading to silty, poor sorting, quartzose (sub-angular grains), chert (rounded grains), argillaceous in part, trace of poor intergranular porosity, no fluorescence, some siderite cement, trace of glauconite
2160 - 2170	Sandstone - light grey, medium hard to soft, fine grained, good sorting, quartzose (sub-rounded grains), chert (sub-rounded), fair intergranular porosity (15%), no fluorescence, some glauconit and siderite cement.
2170 - 2210	Sandstone - light grey, medium hard to soft, fair sorting, quartzose (sub-rounded grains), chert (sub-rounded grains), argillaceous in part, trace of poor intergranular porosity, no fluorescence, siderite cement and glauconite, grains, micaeous in part
2210 - 2240	Sandstone - light grey, medium hard to soft, good sorting, quartzose (sub-angular), chert (sub-rounded), poor intergranular porosity (10%), no fluorescence, trace of pyrite , siderite cement in small part

2240 - 2260	Sandstone - grey, medium hard, fine to very fine grained, poor sorting, quartzose (sub-angular grains), chert (sub-rounded grains), angillaceous in part, trace of poor intergranular porosity, no fluorescence
2260 - 2280	Sandstone - light grey, medium hard, fine grained, fair sorting, quartzose (sub angular grains), chert (sub-rounded grains), argillaceous in part
2280 - 2300	Sandstone - light grey to grey, medium hard, fine grained grading to silt, poor sorting, quartzose (sub-rounded), chert (sub-rounded grains), trace of glauconite, argillaceous in large part
2300 - 2310	Siltstone - grey to dark grey, medium hard, sandy in part, shaly in part
2310 - 2320	Sandstone - light grey, medium hard to soft, fine grained, well sorted, quartzose (sub-rounded grains), chert (rounded grains), poor very fine intergranular porosity (5%), no fluorescence
2320 - 2370	Sandstone - light grey to grey, medium hard, fine grained grading to silt, poorly sorted, quartzose (sub-rounded grains), chert (sub-rounded grains), argillaceous; shale - dark grey, medium hard
2370 - 2400	Siltstone - grey, medium hard, sandy in part, pyritic; grading to sandstone - grey, medium hard very fine grained, quartzose (sub-rounded grains), unsorted, argillaceous, shaly in part
2400 - 2440	Siltstone - grey, medium hard, sandy in part, pyritic; shale - grey to dark grey, medium hard, pyritic and micromicaeous
2440 - 2480	Siltstone - grey, medium hard, pyritic; grading to sandstone - grey, medium hard, fine grained to silt, quartzose (sub-rounded grains)
2480 - 2520	Shale - grey and dark grey, medium hard, silty in part, sandy in part, pyritic; siltstone - grey, medium hard, sandy in part
2520 - 2590	Siltstone - grey, medium hard, pyritic, sandy in small part; shale - dark grey, medium hard, micromicaeous

2590 - 2600	Sandstone - grey to grey-brown, medium hard, fine grained grading to silt, unsorted, quartzose (sub-rounded grains), chert (sub-rounded), argillaceous, calcareous in small part
2600 - 2610	Siltstone - grey and grey-brown, medium hard, grading to sandstone - grey and grey-brown, medium hard, poorly sorted, fine grained to silt, quartzose (sub-rounded grains), chert (sub-rounded), argillaceous; shale - grey to dark grey, medium hard, micromicaeous
2610 - 2690	Siltstone - grey and grey-brown, medium hard; shale - grey to dark grey, medium hard, micromicaeous
2690 - 2750	Siltstone - grey and grey-brown, medium hard
2750 - 2770	Sandstone - light grey to white, soft, soft, fine grained, sorted, quartzose (sub-rounded grains), fair porosity (15%) intergranular, no fluorescence
2770 - 2780	Siltstone - grey, medium hard
2780 - 2790	Sandstone - light grey (salt & pepper), medium hard to soft, fine grained, sorted, quartzose (sub-angular grains), chert (sub-rounded grains), poor intergranular porosity (8%) in part, no fluorescence
2790 - 2840	Siltstone - grey, medium hard; grading to sandstone - grey, medium hard, fine grained grading to silt, poor sorting, quartzose (sub-rounded grains), chert (rounded grains), argillaceous in part, trace poor intergranular porosity, no fluorescence
2840 - 2860	Siltstone - grey, medium hard; grading to sandstone - grey, medium hard, fine grained to silty, poor sorting, argillaceous, quartzose (sub-rounded)
2860 - 2870	Siltstone - grey, medium hard; grading to sandstone - white to grey, soft to medium hard, fine grained to silty, quartzose (sub-angular grains), chert (sub-angular grains), sorted to poorly sorted, poor intergranular porosity (8%) in part (20%), no fluorescence
2870 - 2890	Siltstone - grey, medium hard, sandy in part, pyritic
2890 - 2910	Siltstone - grey, medium hard, sandy in part, pyritic; shale - white to light green, medium hard, pyritic; shale - dark grey, medium hard, micromicaeous

2910 - 2950	Shale - grey to dark grey, medium hard, micromicaceous in part; siltstone - grey, medium hard, pyritic; sandstone - grey, medium hard, very fine grained, unsorted, quartzose (sub-angular grains), argillaceous
2950 - 2970	Sandstone - grey-brown and grey, very fine grained, medium hard, quartzose (sub-angular grains), fair sorting, trace of very fine intergranular porosity, no fluorescence; grading to siltstone - grey and grey-brown, medium hard

Cretaceous Shale 3016 (-2061)

2970 - 3030	Siltstone - light to dark grey, medium hard, sandy in part; shale - dark grey, medium hard, micromicaceous
3030 - 3060	Shale - dark grey, medium hard, micromicaceous; siltstone - grey, medium hard
3060 - 3070	Shale - dark grey, medium hard, micromicaceous, silty in part
3070 - 3130	Shale - dark grey and grey-brown, medium hard, micromicaceous; siltstone - grey-brown, medium hard, sandy in part
3130 - 3150	Shale - grey to dark grey, medium hard, micromicaceous, splintery in part, silty in part
3150 - 3170	Siltstone - grey to dark grey, medium hard; shale - dark grey, medium hard, micromicaceous
3170 - 3210	Shale - dark grey, medium hard, micromicaceous; siltstone - grey to dark grey, medium hard; grading to sandstone - grey, medium hard, very fine grained, quartzose (sub-rounded grains), argillaceous, poorly sorted grains
3210 - 3420	Shale - dark grey, medium hard, micromicaceous, silty in part
3420 - 3460	Siltstone - light to dark grey, medium hard; shale - dark grey, medium hard, micromicaceous; sandstone - light grey, medium hard, very fine grained, poorly sorted, quartzose (sub-rounded grains), chert (sub-rounded grains), argillaceous
3460 - 3530	Shale - dark grey, medium hard, micromicaceous; siltstone - grey-brown to dark grey, medium hard
3530 - 3550	Shale - dark grey to brown, medium hard, micromicaceous
3550 - 3590	Shale - black and dark grey, soft to medium hard, micromicaceous in part, splintery in part, fissile in part, bituminous in small part

3590 - 3610	Shale - dark grey and dark brown, medium hard, micromicaeous, fissile in part, slightly bituminous in part

Basal Cretaceous Sand 3612 (-2661)

3610 - 3620	Sandstone - white (salt & pepper), soft to medium hard, fine to medium grained, fair sorting, quartzose (sub-rounded grains), chert (rounded grains), trace of glauconite, poor intergranular porosity, trace of fluorescence
3620 - 3630	Sandstone - white to light grey (salt & pepper), medium hard, fine grained grading to silt, poorly sorted, quartzose (sub-rounded grains), chert (rounded), argillaceous, pyritic in part
3630 - 3640	Siltstone - light to dark grey, medium hard; sandstone - light grey to grey, medium hard, very fine grained, poorly sorted, quartzose (sub-rounded grains), chert (rounded), argillaceous, pyritic
3640 - 3650	Siltstone - light to dark grey, medium hard, sandstone - light grey to white, medium hard to soft, fine grained grading to silt, poor to fair sorting, quartzose (sub-rounded grains), chert (rounded), argillaceous in part, pyritic, trace of fine intergranular porosity (8%), fair fluorescence in chlorothene
3650 - 3660	Sandstone - white (salt & pepper), medium hard, fine grained, well sorted, quartzose (sub-angular grains), trace of glauconite, trace of fine intergranular porosity, fair fluorescence in chlorothene, pyritic, some pyrobitumen
3660 - 3680	Sandstone - white (salt & pepper), medium hard, fine grained, well sorted, quartzose (sub-angular grains), trace of glauconite. poor intergranular porosity

Hume 3675 (-2724)

3680 - 3720	Limestone - buff to brown, medium [illegible] hard, crypt[illegible] grained to micrograined, slightly argillace[illegible], dense, [illegible] fracture face with pyrobitumen
3720 - 3730	Limestone - buff to dark brown, medium [illegible], cryptograined, chalky in small part, slicken siding dense
3730 - 3760	Limestone - buff to dark brown, soft to medium hard, cryptograined to medium grained, chalky in large part, argillaceous in part, fossils, trace of pyrite

3760 - 3770	Limestone - buff to dark brown and grey, soft to medium hard, cryptograined, chalky in part, trace of fine vugular porosity, no fluorescence
3770 - 3780	Limestone - buff to dark brown and grey, medium hard to soft, cryptograined to fine grained, argillaceous in part, dense; shale - grey, medium hard, calcareous
3780 - 3820	Limestone - buff to dark brown, soft to medium hard, cryptograined, very slightly argillaceous, chalky in part, trace of calcite crystals, slightly dolomitic in part, dense
3820 - 3840	Limestone - buff to dark brown, cryptograined, soft to medium hard, very slightly argillaceous, chalky in large part, some calcite crystals
3840 - 3860	Limestone - buff to dark brown and grey brown, medium hard, chalky in small part, cryptograined to micrograined, dense; shale - dark grey and dark brown, medium hard, calcareous, micromicaeous
3860 - 3880	Limestone - brown to dark brown and grey-brown, medium hard, cryptograined to micrograined, dense, shaly in small part, pyritic
3880 - 3910	Limestone - grey to dark grey and dark brown, medium hard, cryptograined and micrograined, very slightly argillaceous, shaly in part, pyritic, calcite crystals, fossils (brachipods)
3910 - 3940	Shale - black, medium hard, dolomitic, fissile in part; limestone - grey to dark brown and grey-brown, medium hard. very argillaceous cryptograined,
3940 - 3950	Limestone - buff to dark brown and grey, medium hard, cryptograined to fine grained, slightly argillaceous, chalky in small part, much fossil debris, calcite crystals
3950 - 3970	Limestone - dark brown, cryptograined to micrograined, very slightly argillaceous, shaly in part, calcite crystals
3970 - 3980	Limestone - buff to dark brown, medium hard, cryptograined to fine grained, slightly argillaceous, fossils (brachiopods) dense in large part, chalky in small part; shale - dark brown to black, medium hard, calcareous, micromicaeous in part
3980 - 3990	Limestone - buff to dark brown and dark grey, medium hard, fine grained, very slightly argillaceous, fine grained, chalky in small part, dolomitic in small part, calcite crystals

3990 - 4000	Limestone - buff to dark brown, soft to medium hard, cryptograined to fine grained, skeletal material 60%, micritic material 40%, chalky in part, fossils (brachiopods), calcite crystals, trace of fractures, pyrobitumen on fracture faces
4000 - 4010	Limestone - brown to dark brown, medium hard, micrograined, slightly argillaceous, calcite crystal, dense; shale - dark brown and dark grey, medium hard, calcareous
4010 - 4020	Limestone - buff to dark brown and grey, soft to medium hard, cryptograined to fine grained, slightly argillaceous, fossil debris (30%), micritic material (70%), calcite veinlets, dense
4020 - 4040	Limestone - buff to dark brown, soft to medium hard, cryptograined to fine grained, very slightly argillaceous, calcite crystals, fractures coated with pyrobitumen, fossils
4040 - 4060	Limestone - buff to dark brown, medium hard, cryptograined to fine grained, slightly argillaceous, skeleton material 40%, micritic material, calcite veinlets, chalky in part; shale - dark brown to black, medium hard, calcareous
4060 - 4090	Limestone - buff to dark brown, medium hard to soft, cryptograined to fine grained, slightly argillaceous, chalky in part, skeletal material 15%, micritic material 85%, calcite crystals and veinlets, trace of pyrobitumen on calcite
4090 - 4110	Limestone - buff to brown and grey, medium hard, fine grained, very slightly argillaceous, dolomitic in part, skeletal material 50%, micritic material 50%, calcite crystals, some pyrite
4110 - 4120	Limestone (dolomitic) - buff, grey and dark brown, medium hard, fine grained and cryptograined, slightly argillaceous, shaly in part, calcite crystals
4120 - 4140	Shale - grey to black, medium hard, calcareous; limestone - dark brown, medium hard, cryptograined to fine grained, slightly argillaceous, pyritic in part, calcite crystals
4140 - 4160	Shale - dark grey to black, medium hard, calcareous, calcite crystals (sparse)

Bear Rock 4160 (-3209)

4160 - 4190	Dolomite - grey, medium hard, microcrystalline to finely crystalline, argillaceous in part, some secondary dolomite, calcite in filling some former porosity, fracture faces with pyrobitumen, trace of pyrite

4190 - 4200	Dolomite - grey to brown, medium hard, finely crystalline, very slightly calcareous; limestone - buff, grey and brown, medium hard, cryptograined to fine grained, chalky in small part, calcite crystals
4200 - 4210	Dolomite - light brown, medium hard, finely crystalline, slightly argillaceous, poor porosity (4%) in fine vugs and fine intercrystalline, trace of fluorescence in chlorothene, calcite crystals
4210 - 4220	Dolomite - buff to light brown, medium hard, finely crystalline, trace of porosity in very fine vugs, calcite crystals
4220 - 4230	Dolomite - buff to light brown, medium hard, microcrystalline, slightly argillaceous, dense; limestone - buff to grey, medium hard, cryptograined to micrograined, slightly argillaceous, dense, calcite crystals
4230 - 4270	Dolomite - buff to light brown and grey, medium hard, microcrystalline, slightly argillaceous, dense, some calcite crystals
4270 - 4280	Dolomite - buff to light brown, medium hard, finely crystalline, slightly argillaceous; limestone - buff, medium hard, cryptograined, slightly argillaceous, chalky in part, calcite crystals
4280 - 4300	Dolomite - buff to brown, medium hard, cryptocrystalline to finely crystalline, slightly argillaceous, trace of vugular porosity (2%) in fine vugs, no show; limestone - buff, cryptograined, slightly argillaceous, chalky in part, calcite crystals
4300 - 4330	Limestone - buff to dark grey, medium hard, cryptograined to micrograined, very slightly argillaceous, chalky in small part; dolomite - light brown, medium hard, finely crystalline, calcite crystals
4330 - 4410	Dolomite - buff to dark brown, medium hard, microcrystalline, slightly argillaceous; limestone - buff to dark grey, medium hard, cryptograined to micrograined, calcite crystals, pyrobitumen in former porosity, fractures
4410 - 4450	Limestone - buff to dark grey, medium hard, cryptograined to fine grained, very slightly argillaceous, calcite crystals, pyrobitumen in porosity and on fracture faces,; dolomite - light brown, medium hard, microcrystalline, very slightly argillaceous
4450 - 4460	Limestone - buff to black, medium hard, cryptograined to micrograined, vugular with vugs filled with pyrobitumen, no effective porosity, calcite crystals

4460 - 4470	Limestone - buff to black, medium hard, cryptograined to micrograined, fractures filled with pyrobitumen; dolomite - buff to brown and dark grey, medium hard, microcrystalline, dense
4470 - 4490	Limestone - buff to black, medium hard, fine grained, slightly argillaceous, calcite crystals, pyrobitumen on fracture faces
4490 - 4520	Limestone - buff to black, medium hard, cryptograined, slightly argillaceous, pyrobitumen on fracture surfaces; dolomite - light brown, medium hard, microcrystalline, trace of porosity in very fine vugs and very fine intercrystalline type, no stain, calcite crystals
4520 - 4530	Dolomite - buff to dark brown and dark grey, microcrystalline, slightly argillaceous, trace of very fine vugular porosity
4530 - 4550	Dolomite - buff to dark brown and dark grey, microcrystalline, slightly argillaceous; limestone - buff to dark grey, cryptocrystalline, slightly argillaceous, pyrobitumen on fracture faces, calcite crystals
4550 - 4570	Limestone - cream to black, medium hard to soft, slightly argillaceous, cryptograined to micrograined; dolomite - buff to brown and dark grey, micrograined, slightly argillaceous, pyrobitumen on fracture surfaces
4570 - 4580	Dolomite - brown to dark brown, medium hard, microcrystalline, slightly argillaceous, slightly limey, trace of very fine vugular porosity, no fluorescence in chlorothene
4580 - 4590	Limestone - buff to brown and dark grey, medium hard, cryptograined to micrograined, slightly argillaceous; dolomite - brown to dark brown, cryptocrystalline, slightly argillaceous, calcite crystals, pyrobitumen on fracture faces
4590 - 4650	Limestone - cream to dark grey, medium hard, cryptograined to micrograined, slightly argillaceous; dolomite - brown, medium hard, microcrystalline, slightly argillaceous, poor porosity in very fine vugs, no fluorescence in chlorothene, calcite veinlets
4650 - 4660	Limestone - white to buff to dark grey, medium hard, cryptograined to micrograined, many calcite crystals, fair intercrystalline porosity in part, no staining, dolomitic in part
4660 - 4670	Limestone - white and buff to dark grey, medium hard, cryptograined to fine grained, many calcite crystals (fine), shaly structure in part, trace of fine intercrystalline, porosity, no staining, pyrobitumen on fracture faces and in former porosity

4670 - 4710	Limestone - white and buff to dark grey, medium hard, cryptograined, slightly argillaceous; dolomite - buff to brown, medium hard, slightly argillaceous, micrograined, pyrobitumen on fracture faces, calcite crystals
4710 - 4740	Dolomite - buff to light brown, medium hard, cryptocrystalline to microcrystalline, slightly argillaceous; limestone - buff to dark grey, medium hard, cryptograined, calcite crystals, pyrobitumen in former porosity
4740 - 4760	Limestone - buff and cream and dark grey, medium hard, cryptograined to micrograined, slightly argillaceous in part, calcite crystals, pyrobitumen in fractures
4760 - 4770	Limestone - white to grey, medium hard, cryptograined to fine grained, masses of fine calcite crystals, fair intercrystalline porosity, no stain; dolomite - buff to light brown, medium hard, microcrystalline, fine vugular porosity (poor) in small part, no staining, pyrobitumen on fractures
4770 - 4790	Limestone - white to dark grey, medium hard, cryptograined to fine grained, argillaceous in part, trace of pyrite, pyrobitumen on fracture faces, calcite crystals; shale - dark grey to black, medium hard, calcareous in part
4790 - 4800	Dolomite - brown to dark brown and dark grey, cryptocrystalline to microcrystalline, argillaceous, calcite crystals and veinlets
4800 - 4810	Dolomite - brown to dark brown and dark grey, cryptocrystalline to microcrystalline, argillaceous, calcite crystals and veinlets; limestone - white to dark grey, medium hard, cryptograined to micrograined, calcite crystals, veinlets of calcite, pyrobitumen in former porosity and on fracture faces
4810 - 4870	Dolomite - light to dark brown and black, medium hard, cryptocrystalline to microcrystalline, argillaceous, calcite crystals and veinlets
4870 - 4890	Dolomite - light to dark brown, medium hard, microcrystalline, very slightly argillaceous, calcite crystals, trace of fine vugular porosity, trace of pyrite, no staining
4890 - 4950	Dolomite - light to dark brown, medium hard, microcrystalline, slightly argillaceous, limey in part; limestone - buff to dark grey, medium hard, cryptograined, slightly argillaceous, calcite crystals, trace of pyrobitumen
4950 - 4960	Dolomite - buff, grey-brown and dark grey, medium hard, cryptocrystalline to microcrystalline, very slightly argillaceous, limey in part, calcite crystals

4960 - 4990	Dolomite - buff, grey-brown and dark grey, medium hard, cryptocrystalline, very slightly argillaceous; limestone - buff and light to dark grey, medium hard, cryptograined, slightly argillaceous, calcite crystals, pyrobitumen
4990 - 5030	Dolomite - buff to dark brown and dark grey, medium hard, microcrystalline, slightly argillaceous, calcite crystals, slightly limey in part
5030 - 5040	Dolomite - buff to dark brown and dark grey, medium hard microcrystalline to finely crystalline, very slightly argillaceous, trace of fine intercrystalline porosity, no live staining, calcite crystals, pyrobitumen on fracture faces
5040 - 5060	Dolomite - grey brown to dark brown, medium hard, microcrystalline, slightly argillaceous, trace of fine intercrystalline porosity, no staining, pyrobitumen on fracture faces; limestone - white, buff and grey, soft to medium hard, cryptograined, chalky in part
5060 - 5100	Dolomite - light brown, medium hard, limey in part, microcrystalline, argillaceous in part, trace of porosity in fine vugs, no staining, calcite crystals, pyrobitumen
5100 - 5110	Limestone - buff to dark grey, medium hard, cryptograined to micrograined, very slightly argillaceous; dolomite - buff to brown, medium hard, microcrystalline to finely crystalline, slightly argillaceous, dense
5110 - 5130	Dolomite - grey-brown, medium hard, microcrystalline, slightly argillaceous, calcite crystals, limey in part
5130 - 5170	Limestone - light to dark grey and buff, medium hard, micrograined, argillaceous; dolomite - buff and light brown, medium hard, microcrystalline, slightly argillaceous, pyrobitumen on fractures
5170 - 5180	Dolomite - light brown, medium hard, microcrystalline, microsucrosic; limestone - grey to dark grey, medium hard, micrograined, slightly argillaceous, pyrobitumen, calcite crystals
5180 - 5200	Limestone - buff and light to dark grey, medium hard to soft, slightly argillaceous, cryptograined, chalky in part, slightly dolomitic in part, pyrobitumen in fractures

Ronning 5212 (-4261)

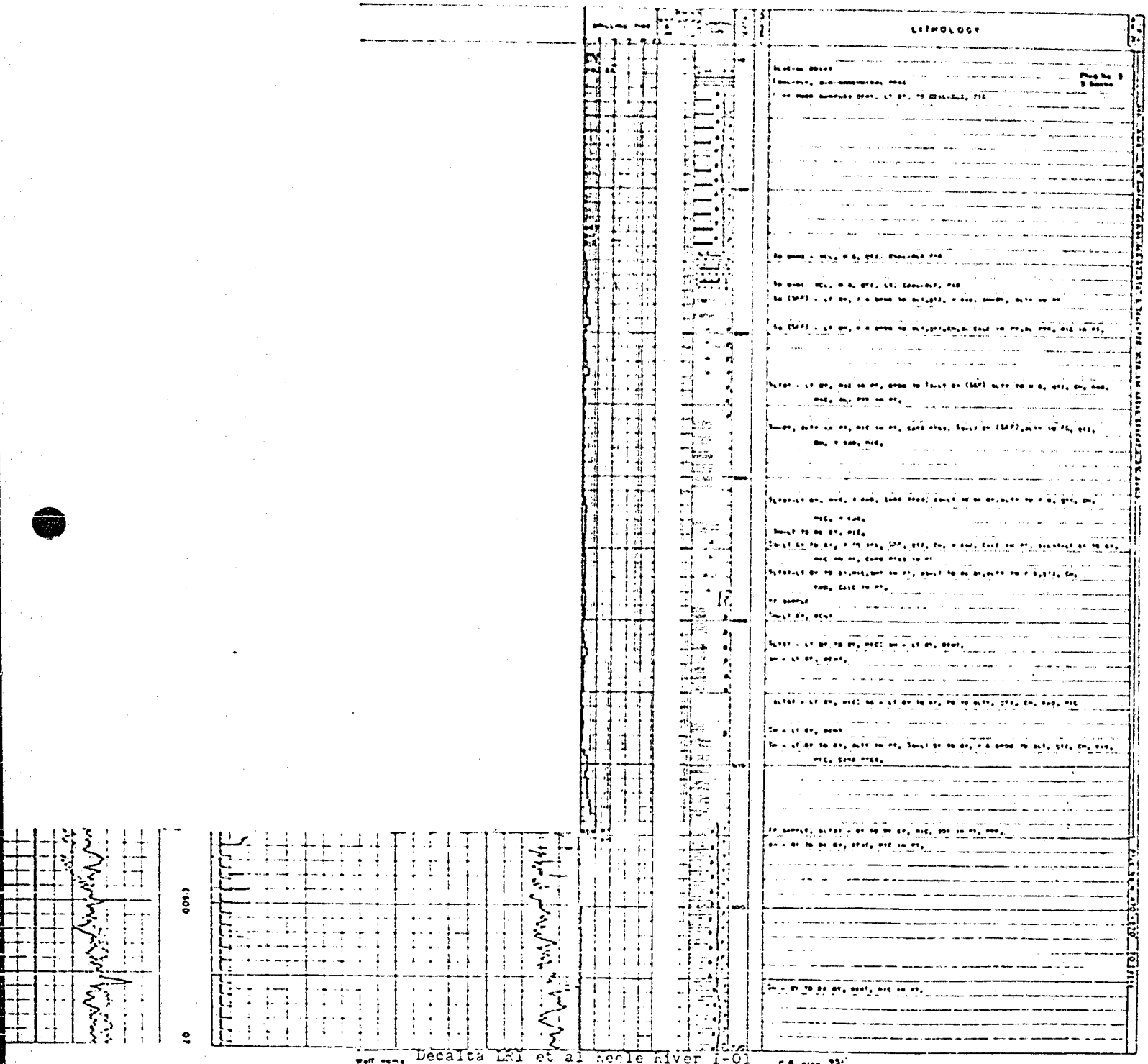
5200 - 5230	Limestone - buff to light brown and light to dark grey, medium hard, slightly argillaceous, cryptograined to micrograined, pyrobitumen in fractures; dolomite - buff and light brown, microsucrosic, slightly argillaceous
5230 - 5240	Limestone - buff to brown and light to dark grey, medium hard to soft, cryptograined to micrograined, dolomitic in part, pyrobitumen
5240 - 5250	Limestone - buff and white to dark grey, medium hard to soft, cryptograined to fine grained, 20% skeletal matrix, 80 micritic material, chalky in part, sand grains in part, fine to medium, quartz (rounded)
5250 - 5260	Limestone - buff and white to dark grey, medium hard to soft, slight argillaceous, cryptograined to medium grained, skeletal material 40%, micritic material 60%, selenite common
5260 - 5270	Limestone - light to dark grey, medium hard to soft, cryptograined to fine grained, argillaceous in part; dolomite - buff to light brown, medium hard, cryptocrystalline, trace of calcite crystals, pyrobitumen in fractures
5270 - 5280	Limestone - white to dark grey and buff, cryptograined to fine grained, slightly argillaceous, floating sand grains (quartz) frosted, silt to fine grained, sub-rounded and rounded, clear; dolomite - light brown, medium hard, cryptocrystalline, pyrobitumen in fractures
5280 - 5330	Limestone - white to dark grey and buff, cryptograined to fine grained, slightly argillaceous, floating sand grains; sandstone - light grey, fine grain grading to silt, unsorted, quartzose (sub-angular to rounded), frosted, chert (rounded), calcareous in part; dolomite - buff to light brown, medium hard, cryptocrystalline, pyrobitumen, pyrite, selenite
5330 - 5340	Dolomite - light brown, medium hard, cryptocrystalline, very slightly argillaceous; sandstone - white to light grey, medium hard, fine grained, unsorted, quartzose (sub-angular to rounded), frosted, calcareous in part, dolomitic in part, pyritic
5340 - 5360	Sandstone - light grey to grey and grey green, medium hard, fine grained grading to silt , unsorted, quartzose (rounded grains), frosted, dolomitic in part, calcareous in part; dolomite - light brown, medium hard, cryptocrystalline, limey in part

5360 - 5380	Sandstone - white and light grey, medium hard, fine grained grading to silt, unsorted, quartzose (rounded), frosted, dolomitic in part, calcareous in part; dolomite - buff to brown, medium hard, cryptocrystalline; shale - grey green, medium hard, dolomitic
5380 - 5400	Dolomite - buff to brown, medium hard, cryptocrystalline, calcite crystals, pyrobitumen on fracture faces; sandstone - white to light grey, medium hard, fine grained grading to silt, dolomitic in part, calcareous in part
5400 - 5410	Sandstone - white and light grey and grey-green, medium hard, fine grained grading to silt, medium sorting, quartzose (sub-rounded to rounded), frosted, calcareous in part, dolomitic in part; dolomite (limey in part) - cream, buff, orange and grey-green, cryptocrystalline; limestone - white to buff, medium hard to soft, cryptograined, chalky in part; pyrobitumen
5410 - 5430	Dolomite - buff to brown and grey, medium hard, cryptocrystalline, slightly argillaceous; limestone - buff to brown, medium hard, argillaceous in part, sandy in part, calcite crystals, pyrobitumen on fracture faces
5430 - 5440	Dolomite - buff to dark brown, medium hard, finely crystalline, trace of fine intercrystalline porosity, no fluorescence; limestone - buff to brown, medium hard, cryptograin to fine grained, pyrobitumen in fractures
5440 - 5450	Dolomite - buff to light brown, medium hard, cryptocrystalline, evidence of fracture porosity, pyrobitumen on fractures; limestone - cream and buff to dark brown and grey, cryptograined, slightly argillaceous, fracture coated with pyrobitumen
5450 - 5480	Limestone - cream, buff and grey, medium hard to soft, cryptograined to micrograined, silty in part, dolomitic in part, pyrobitumen on fracture faces; dolomite - buff to brown, medium hard, microcrystalline, calcite crystals
5480 - 5490	Sandstone - white to light grey, fine to very fine grained, medium hard, calcareous, poorly sorted, quartzose (sub-rounded); dolomite - brown, medium hard, microcrystalline (very poor sample)
5490 - 5500	Limestone - white and buff to dark grey, medium hard, cryptograined to micrograined, sandy in part; dolomite - buff to brown, medium hard, cryptocrystalline to microcrystalline
5500 - 5510	Limestone - white to light grey, medium hard, cryptograined to micrograined, dolomitic in part, sandy in part, chalky in small part

5510 - 5520	Limestone - buff to dark grey, medium hard, cryptograined to fine grained, slightly argillaceous, sandy in part, dolomitic in part, chalky in small part, stylolites, pyrobitumen
5520 - 5530	Dolomite - buff to grey, medium hard, cryptocrystalline to microcrystalline, sandy and silty, limey in part, calcite crystals
5530 - 5540	Dolomite - buff to grey, pink, red and brown, medium hard, silty, cryptocrystalline, limey in part, shaly in part, limestone - varicoloured
5540 - 5580	Dolomite - cream to red and light grey, medium hard, cryptocrystalline to microcrystalline, shaly in part,; limestone - light green, cream and grey, medium hard, cryptograined to fine grained, silty in part; shale - grey, green and red, medium hard, calcareous in part, dolomitic in part, micromicaeous in part, calcite crystals
5580 - 5590	Dolomite - buff to brown, medium hard, cryptocrystalline to microcrystalline, calcite crystals; limestone - buff and grey, medium hard, cryptograined, very slightly argillaceous, silty in part; sandstone - white to red, medium hard, fine grained, sorted, quartzose (sub-angular grains), dolomitic
5590 - 5600	Dolomite - buff, red and brown and grey, medium hard, cryptocrystalline, very slightly argillaceous; shale - red and green, medium hard, dolomitic; limestone - buff to brown, medium hard, cryptograined to micrograined, slightly argillaceous

SECTION II

f) STRIP LOG



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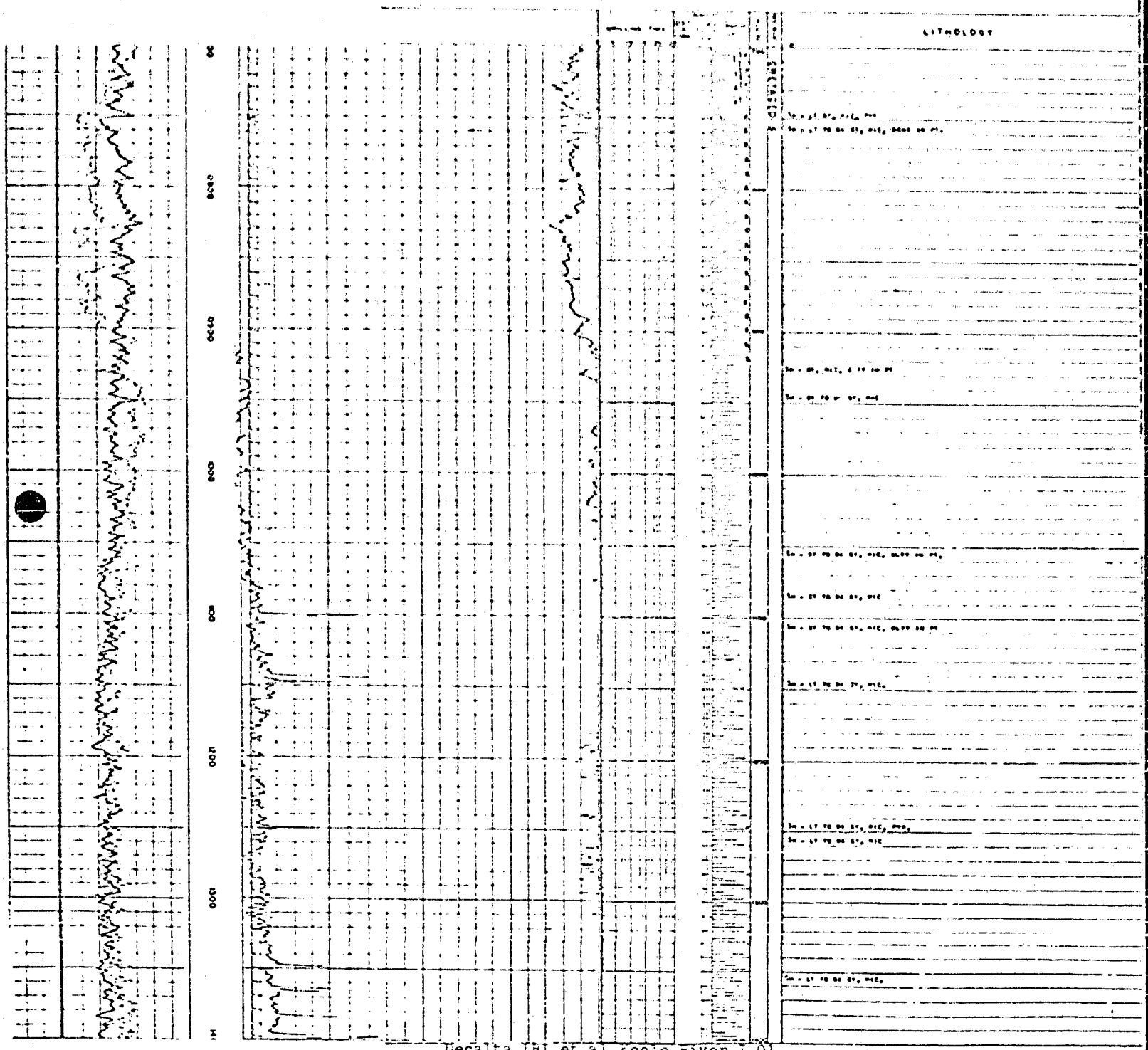
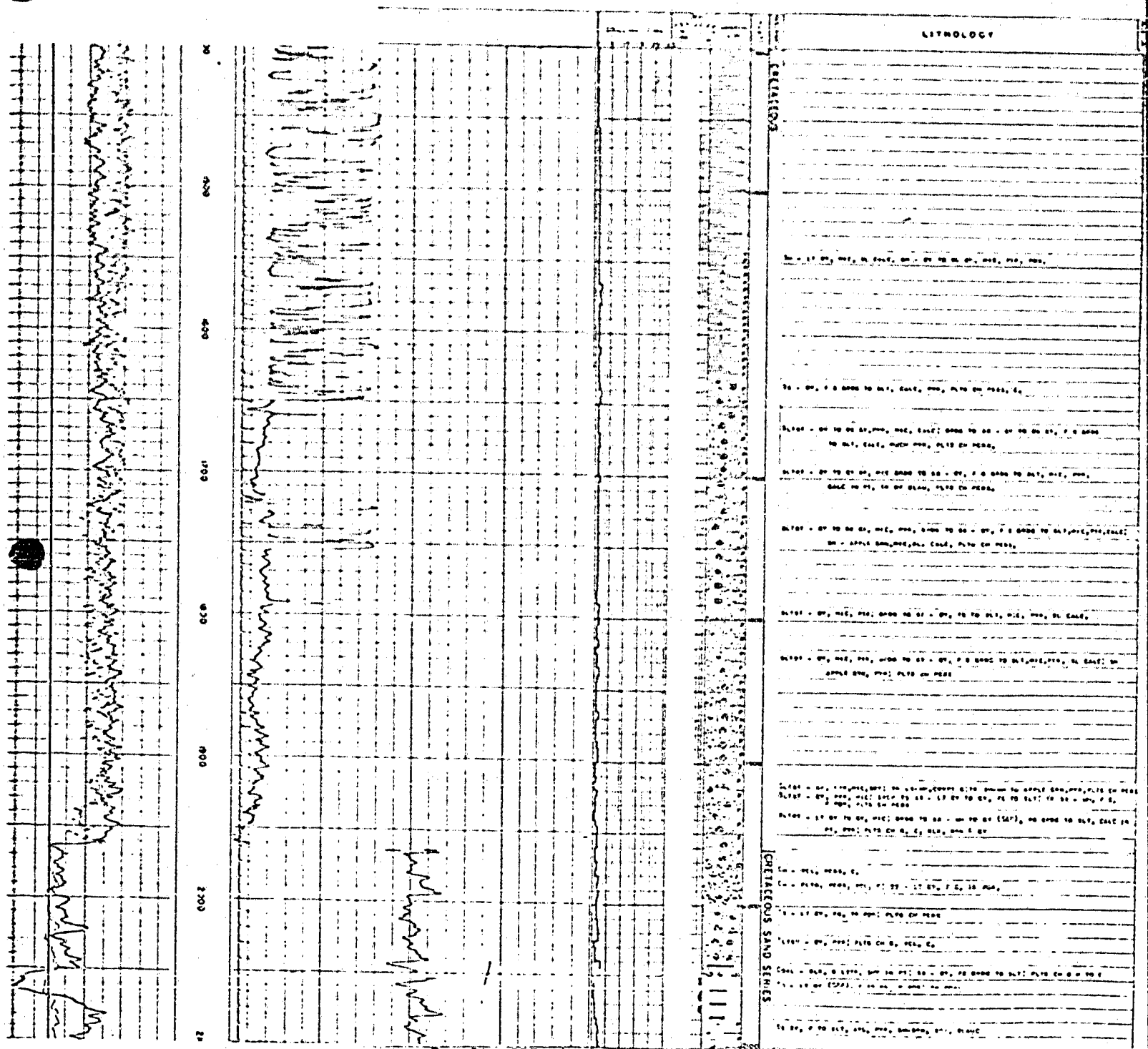
f) STRIP LOG



SECTION II

f) STRIP LOG



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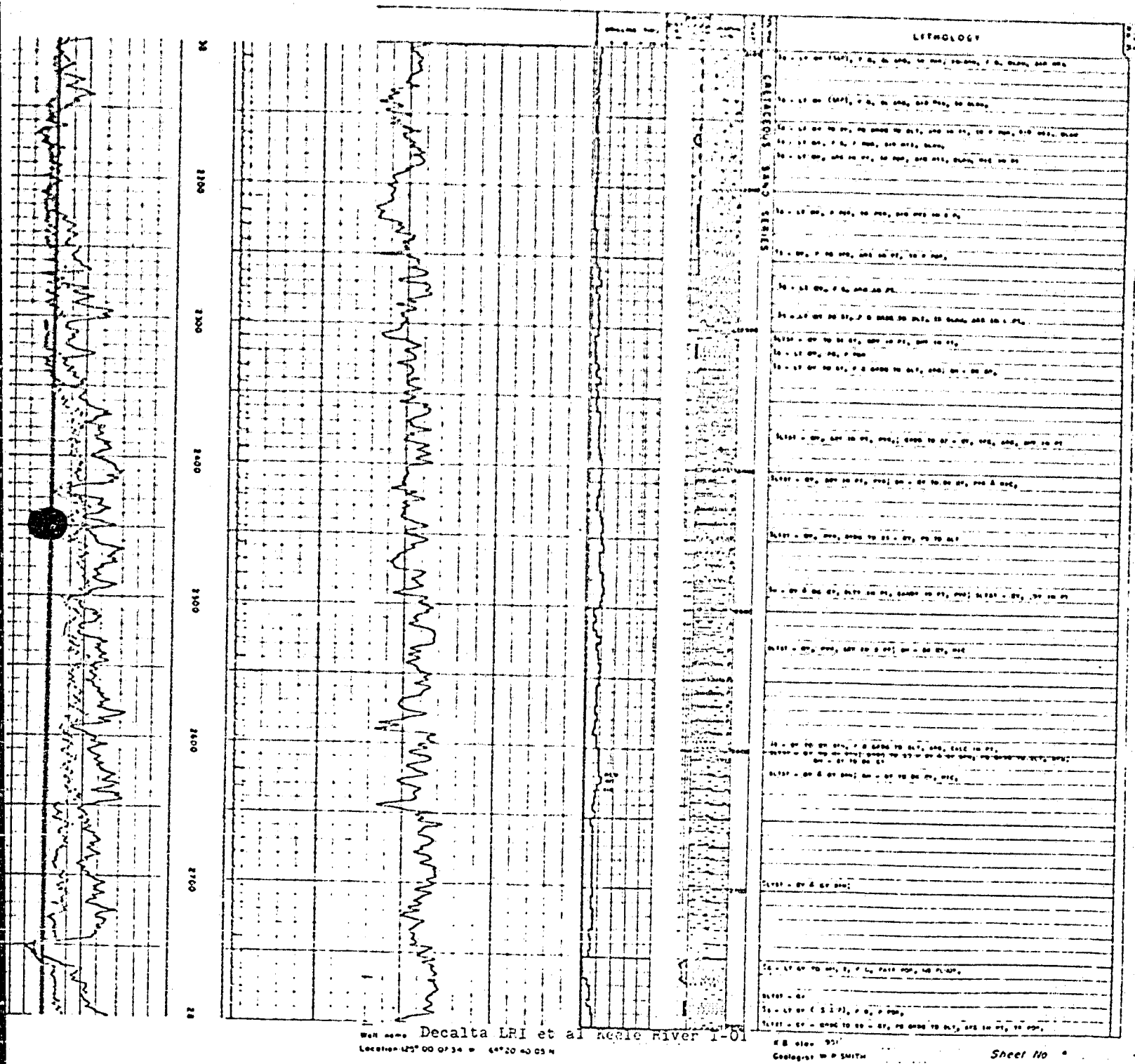


Well name Decalta LPI et al Keele River I-01

Location 125° 00 07.34 W 64°20 40.03 N

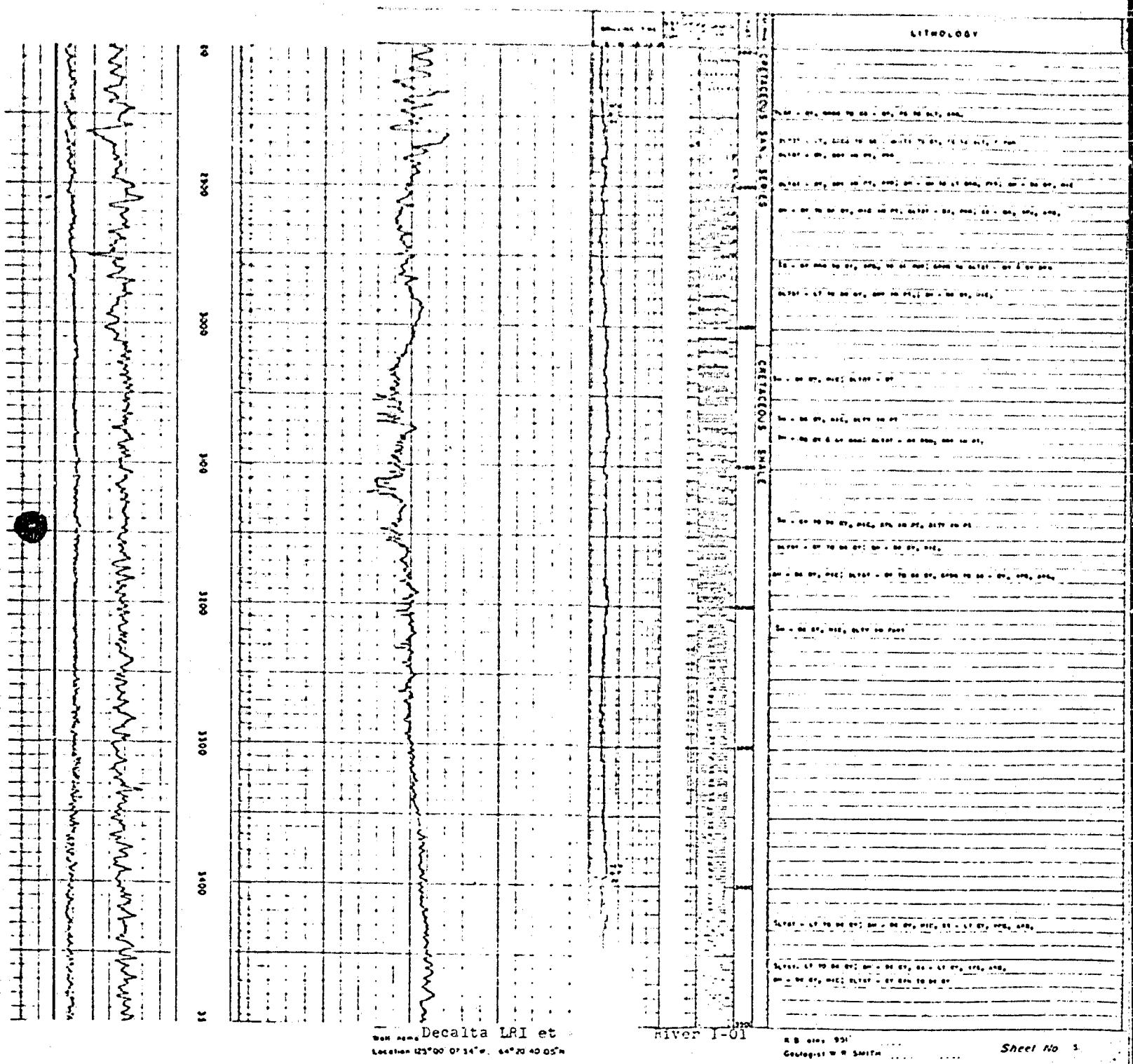
K.B. elev. 951'

Geologist W.P. SMITH

Sheet No

SECTION II

f) STRIP LOG



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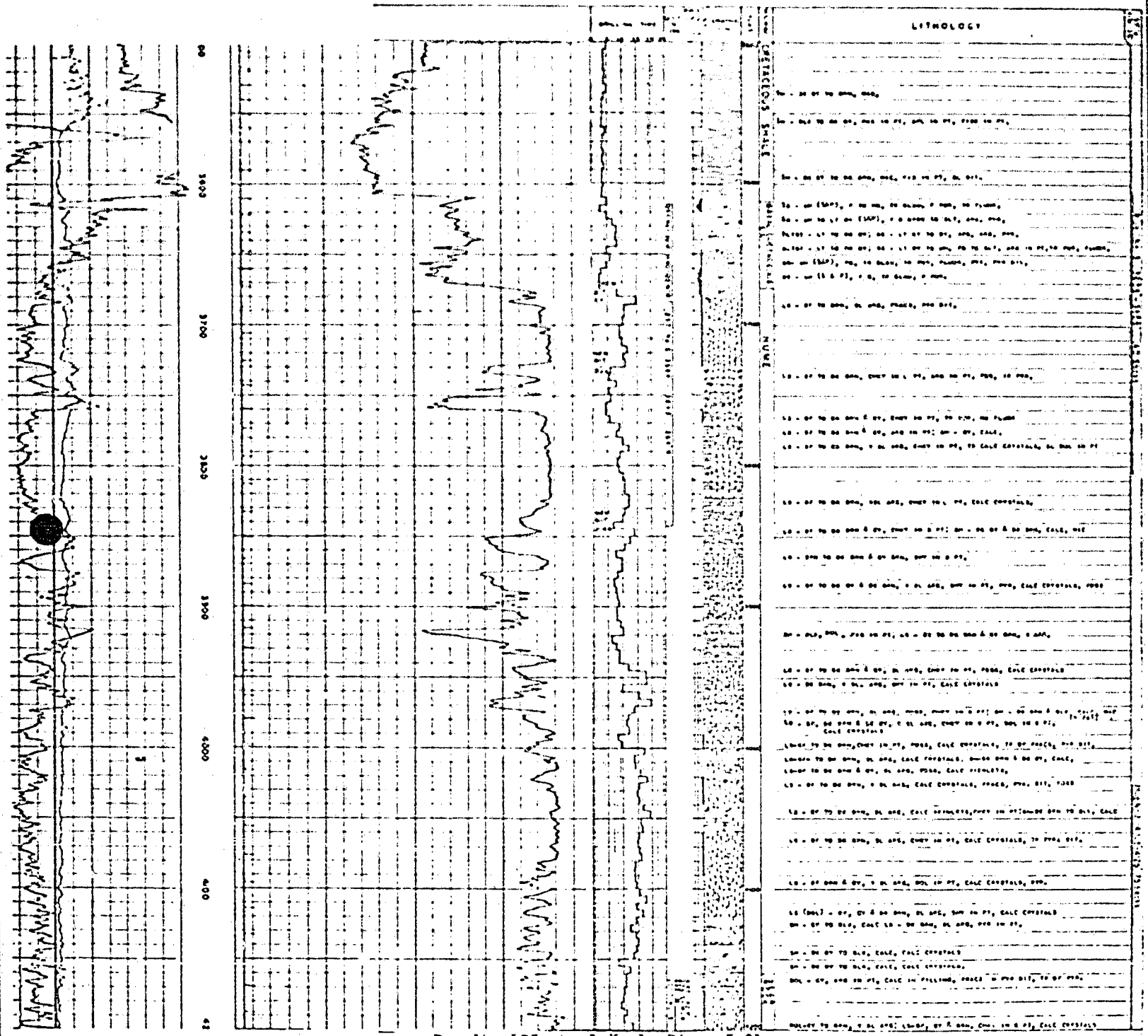
f) STRIP LOG



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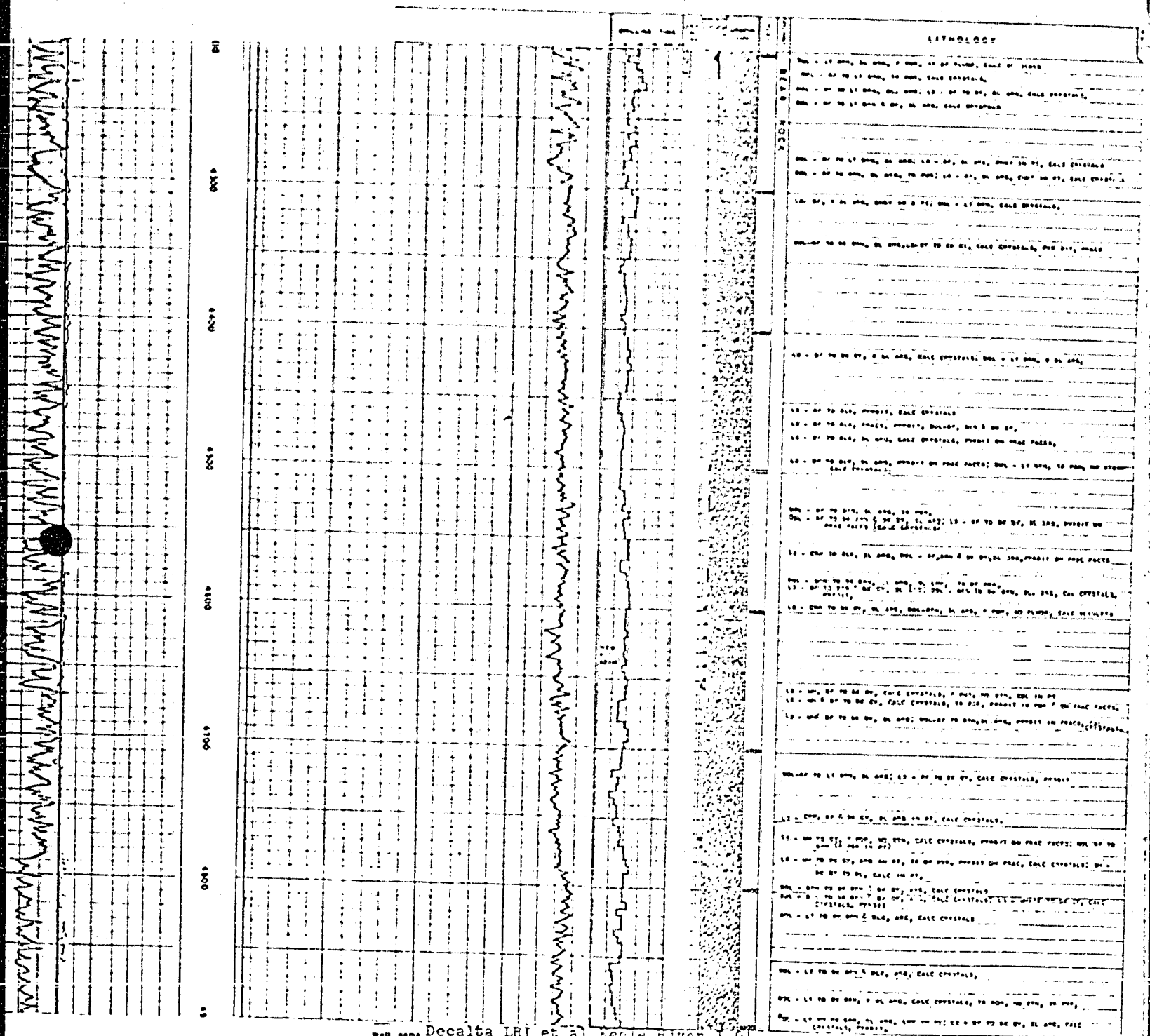
f) STRIP LOG



SECTION II

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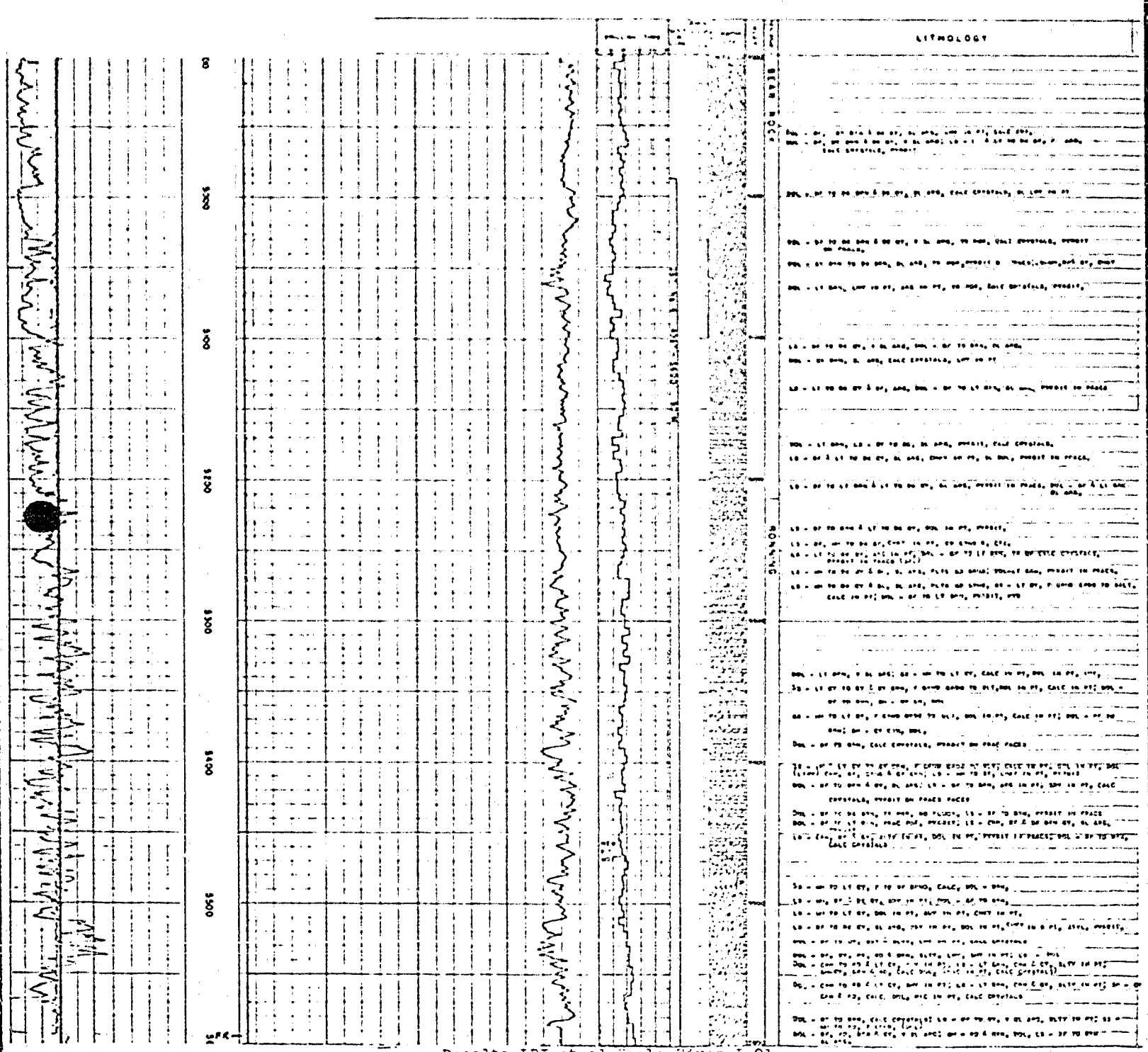


Well name Decalta LPI et al Keele River I-01

Location 125° 00 07.34" W 64° 20 40.05" N

K B elev 33'

Geologist W R SMITH

Sheet No 8

SECTION III

SECTION III

WESTERN DECALTA PETROLEUM LIMITED

DRILL STEM TEST REPORT

Company: Western Decalta Petroleum Limited — Drill Stem Test No.: 1

Name of Well: Decalta LRI et al Keele River I-01 — Date Test Run: December 19, 1970

Testing Company: B. J. Services — Operator: W. L. Budvarson

Type Packer: Dual Bottom Hole — Size Packer(s): 6-1/2 — Choke: 1/2"

Interval Tested: 3614' to 3680' — Formation: Cretaceous

Test Data: Preflow 23 mins.

Initial shut in: Time Packer set 11:42 AM. Time Tool Opened 12:06 PM. (elapsed) 24 mins.

Flow Period: Time Tool Opened 12:06 PM. Time Tool Closed 1:06 PM. (elapsed) 60 mins.

Final shut in: Time Tool Closed 1:06 PM. Time Tool Pulled 2:00 PM. (elapsed) 54 mins.

Tight Hole Test: Yes ..... No X ..... Size of Chamber .....

Water Cushion: Nil ..... Type of Hole: (Rathole) (Fullhole) (Cased)

T.D. Driller: 3680 ..... T.D. Tester: 3680 ..... Was Test A Misrun: No

Cause of Misrun: .....

Flow Data:

Description of Initial Blow: Weak initial puff. Steady weak blow throughout test.

Did Blow die or Decrease: Steady

Gas Flow To Surface In N/A mins. Initial Gas Flow ..... MCF/Day

Stabilized Gas Flow ..... MCF/Day Measured by. (Test) (Impact) (Side Static)

Time For Gas Flow to Stabilize ..... mins. Gas Description: (Sweet) (Sour) (Dry) (Wet)

Gas Sample Saved After ..... mins. Fluid To Surface In ..... mins.

Fluid Description: .....

Nature of Flow: .....

Remarks: .....

Recovery:

Total fluid in (size) 2-7/8" I.D. Collars OD drill pipe: 120 feet .98 barrels

(describe fluid) ..... Oil: ..... feet ..... barrels

..... Water: ..... feet ..... barrels

salt water cut Mud: 120 feet .98 barrels

Saved Samples At: 120 ft. 30 ft. 0 ft. above the test tool

Weight of mud before test 9.2 lbs./gal.: Chloride content too low to read ppm

Weight of mud recovered ..... lbs./gal. Chloride content ..... ppm

Weight of water recovered 8.65 lbs./gal.: Chloride content 3847 ppm

Oil Recovered: ..... °API Color ..... Smell .....

Pressure Data: @ 3616' K.B.

Initial Hydrostatic: (Office) 1769 (Field) ..... Final: (Office) 1766 (Field) .....

Initial Shut In Pressure 1289 ..... Final: 1267 .....

Initial Flow Pressure 78 ..... Final: 157 .....

Well Bore Temp: 80° °F Bomb Capacity: Top 3600# Bottom 5500#

Engineer: D. A. Crawford

BJ BORG WARNER

TESTING REPORT

DRILL-STEM TEST DATA

Well Name DECALTA LRI ET AL KEELE RIVER — Test No ONE

Well Number I-01 — Zone Tested CRETACEOUS

Company WEST DECALTA PETROLEUM LTD — Interval 3614 3680

Comp Rep W.R. SMITH — Tester B. BUDUARSON — Date DEC. 19, 1970

Type of Test DUAL BOTTOM HOLE — RFS Tool No 113 (TO CORE LAB EDM.)

Preflow 23 mins ISI 24 mins Flow 60 mins FSI 54 mins

	I REC No 2227	O REC No 2011	REC No
	3600 RANGE 12 HR CLOCK	5500 RANGE 12 HR CLOCK	RANGE HR CLOCK
DEPTH	3597	3616	
Initial Hydro Mud Press	1760	1769	
Initial Shut In Press	1275	1289	
Initial Flow Press	73	78	
Final Flow Press	150	157	
Final Shut In Press	1257	1267	
Final Hydro Mud Press	1758	1766	

Mud Drop NIL — Fluid Loss 7.8 — Mud Weight 9.2

Viscosity 50 — Temperature °F 80 — Net Pay Tested EST. 30 FT

Top Packer Depth 3608 — Bottom Packer Depth 3614 — Total Depth 3680

Drill Pipe Size 4.5 E.H. — Wt 16.60 — Drill Collar I.D 2.875 H-90 — Ft. Run 534

Surface Choke Size OPEN — Bottom Choke Size .5 — Main Hole Size 7.875

Anchor Size 4.75 O.D. — Rat Hole Size — Feet of Rat Hole

Cushion Amount — Type — Rubber Size 6.5

Fluid Recovery Total Feet 120

Recovered 120 Feet of SALT WATER CUT MUD (3847 PPM)

Recovered Feet of

Recovered Feet of

Recovered Feet of

Recovered Feet of

Gas Recovery — How Measured — Riser size

mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day

Bleed Off Time for Drill Pipe 16 MIN.

REMARKS: INITIAL PUFF WEAK ON PREFLOW.
WEAK STEADY BLOW THROUGHOUT TEST.

A Core Lab Gas Cont. No. — Chem - Geo. Lab Gas Cont. No.

BJ BORG WARNER

December 19, 1970 #1

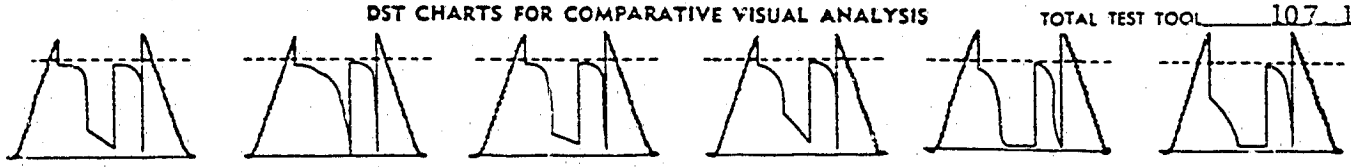
DECALTA KEELE R. #I-01 **TESTING REPORT**

4S LANDING SUB		
4S CHAMBER		
~~4S TOOL OR~~ P.O SUB		1.00
CO SUB		1.00
SHUT IN TOOL		5.20
R.P.S. No	113	3.50
R.P.S. No		
HYDRAULIC TOOL		7.15
JARS	SUTLIFF #19	5.50
RECORDER No.	Ins. 2227	5.00 DEPTH 3597
RECORDER No.		DEPTH
SAFETY JOINT		1.75
BY PASS SUB		
1. PACKER DEPTH 3608 — PACKER		6.00
2. PACKER DEPTH 3614 — PACKER		5.00 — TOTAL TOOL ABOVE INTERVAL 41.10
ANCHOR—SPECIFY		1.00
BLANK OFF OR BY PASS SUB		
RECORDER No.	OUTS 2011	5.00 DEPTH 3616
3. PACKER DEPTH — PACKER		— TOTAL INTERVAL 66.00
4. PACKER DEPTH — PACKER		
ANCHOR—SPECIFY		
	PERFS	57.00
RECORDER No		DEPTH
TOOL DEPTH 3680 — BULLNOSE		3.00

TOTAL TAIL PIPE 107.10

TOTAL TEST TOOL 107.10

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS



HIGH PERMEABILITY STRONG DAMAGE EFFECT | HIGH PERMEABILITY NO DAMAGE EFFECT | MEDIUM PERMEABILITY STRONG DAMAGE EFFECT | MEDIUM PERMEABILITY NO DAMAGE EFFECT | LOW PERMEABILITY STRONG DAMAGE EFFECT | LOW PERMEABILITY NO DAMAGE EFFECT

B

WELL NAME CECALTA LRI ET AL KEELE RIVER DST. NO. ONE

LOCATION 7-01 REC. NO. 2227 DEPTH 3597.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
RUNNING IN HOLE	1	0.0	0.0
	2	77.0	1669.3
	3	120.0	1667.6
	4	121.0	1756.9
INITIAL HYDROSTATIC PRESSURE	5	166.0	1760.5
FIRST FLOW PERIOD	6	166.0	26.5
	7	171.0	29.2
	8	176.0	38.9
	9	181.0	47.7
	10	186.0	57.4
FINAL FLOWING PRESSURE	11	189.0	65.4
BUILD-UP AFTER FIRST FLOW	12	189.0	65.4
	13	194.0	1123.3
	14	199.0	1196.6
	15	204.0	1235.0
	16	209.0	1260.9
INITIAL SHUT-IN PRESSURE	17	213.0	1275.2
FINAL FLOW PERIOD	18	213.0	1275.2
INITIAL FLOWING PRESSURE	19	216.0	73.3
	20	218.0	73.3
	21	223.0	79.5
	22	228.0	87.5
	23	233.0	94.5
	24	238.0	102.5
	25	243.0	108.7
	26	248.0	116.6
	27	253.0	121.9
	28	258.0	129.0
	29	263.0	136.0
	30	268.0	143.1
FINAL FLOWING PRESSURE	31	273.0	150.2
BUILD-UP AFTER FINAL FLOW	32	273.0	150.2
	33	278.0	1014.3
	34	283.0	1091.2
	35	288.0	1133.2
	36	293.0	1162.6

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. ONE

LOCATION I-01 REC. NO. 2227 DEPTH 3597.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
	37	298.0	1185.9
	38	303.0	1203.8
	39	308.0	1218.1
	40	313.0	1231.5
	41	318.0	1241.3
	42	323.0	1251.1
FINAL SHUT-IN PRESSURE	43	327.0	1257.4
FINAL HYDROSTATIC PRESSURE	44	327.0	1757.8
PULLING OUT OF HOLE	45	344.0	1757.8
OUT	46	471.0	0.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. ONE

LOCATION I-01 REC. NO. 2227 DEPTH 3597.

CALCULATIONS FOR LIQUID RECOVERY (FIRST SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE 1392.5

NO. OF POINTS CONSIDERED IN BUILD-UP 5
NO. OF POINTS USED IN EXTRAPOLATION 4
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)..... 1.39
EFFECTIVE PRODUCING TIME (MIN) 23.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. ONE

LOCATION I-01 REC. NO. 2227 DEPTH 3597.

DATA FOR BUILD-UP PLOT (FIRST SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSUR DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
13	5.0	1123.3			5.60
POINTS USED IN EXTRAPOLATION					
14	10.0	1196.6	1184.7	-11.9	3.30
15	15.0	1235.0	1230.7	-4.3	2.53
16	20.0	1260.9	1259.2	-1.7	2.15
17	24.0	1275.2	1275.5	0.2	1.96

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. ONE

LOCATION I-01 REC. NO. 2227 DEPTH 3597.

CALCULATIONS FOR LIQUID RECOVERY (SECOND SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE	1384.2
NO. OF POINTS CONSIDERED IN BUILD-UP	11
NO. OF POINTS USED IN EXTRAPOLATION	8
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)	0.49
EFFECTIVE PRODUCING TIME (MIN)	83.0
(B) IN SITU CAPACITY (KH - MD FT)	8.63
SLOPE OF BUILD-UP CURVE (PSI/CYCLE)	314.86
PRODUCING RATE (BBL/DAY)	16.72
FLUID VISCOSITY (CP)	1.000
FORMATION VOLUME FACTOR (RES BBL/ST BBL)	1.000
(C) EFFECTIVE PERMEABILITY (MD)	0.29
FORMATION THICKNESS	30.00
(D) PRODUCTIVITY INDEX (BBL/DAY/PSI)	0.01
FLOWING PRESSURE (PSIG)	150.2
(E) APPROXIMATE DRAINAGE RADIUS (FT)	16.1
TOTAL FLOWING TIME (MIN)	83.0
(F) ESTIMATED DAMAGE RATIO	1.16
RESERVOIR POROSITY (PERCENT)	25.00
TOTAL COMPRESSIBILITY (VOL/VOL/PSI X 10-6)	6.40
WELL-BORE RADIUS (IN)	3.94
CALCULATED SKIN FACTOR	0.90
(G) PRODUCTION WITH DAMAGE REMOVED (BBL/DAY)	19.4

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. ONE

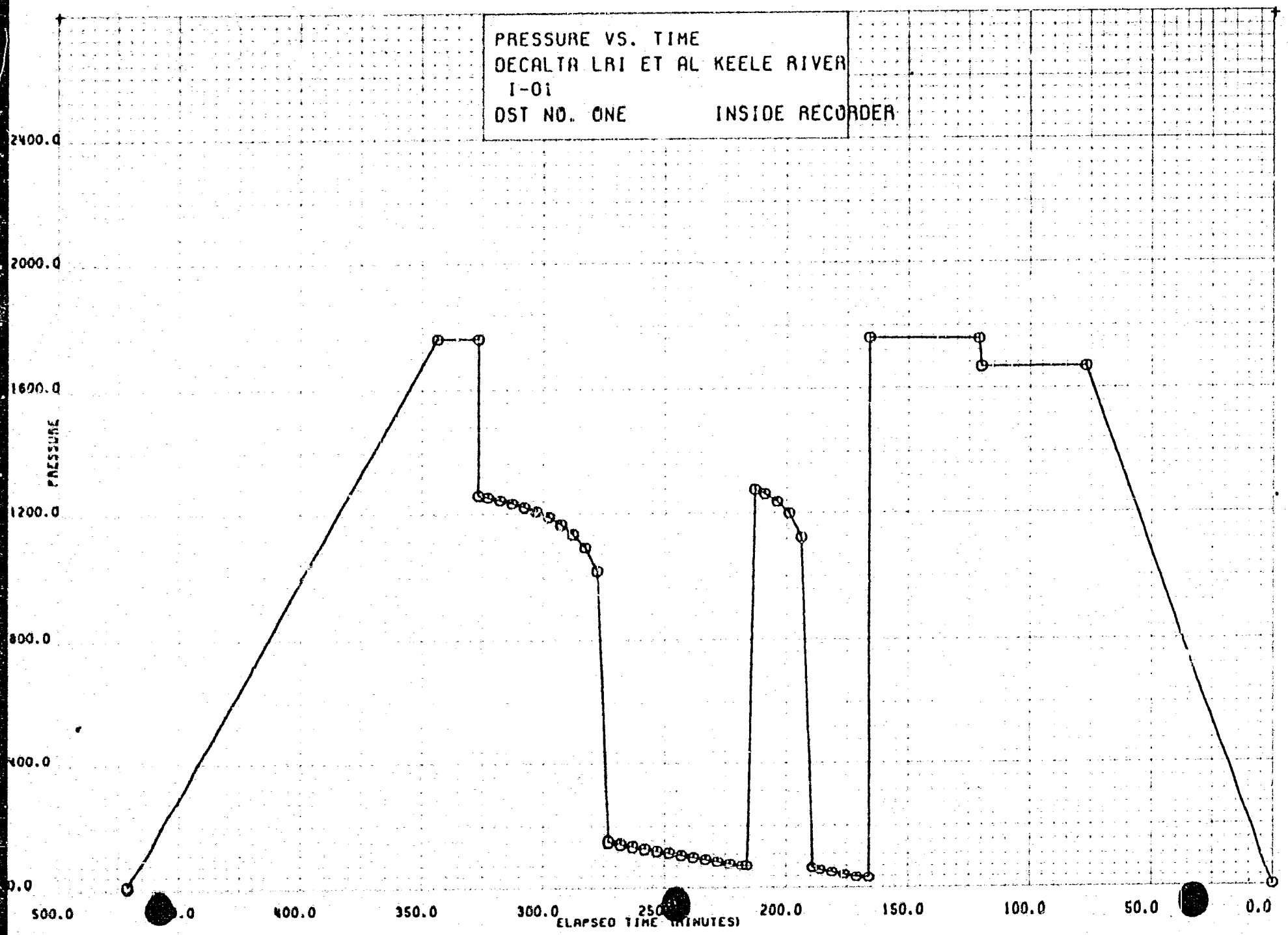
LOCATION I-01 REC. NO. 2227 DEPTH 3597.

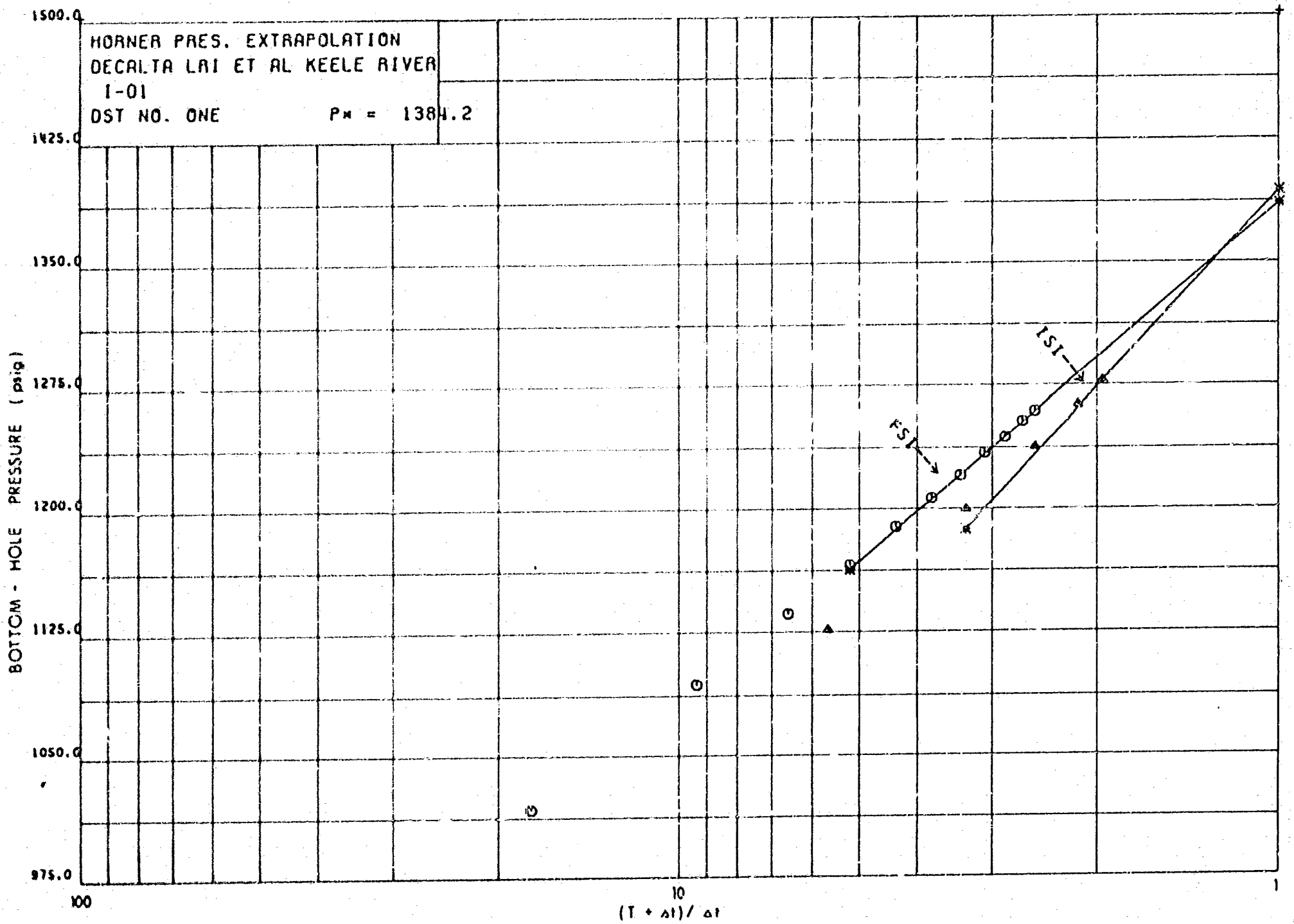
DATA FOR BUILD-UP PLOT (SECOND SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
33	5.0	1014.3			17.60
34	10.0	1091.2			9.30
35	15.0	1133.2			6.53
POINTS USED IN EXTRAPOLATION					
36	20.0	1162.6	1160.1	-2.5	5.15
37	25.0	1185.9	1184.1	-1.7	4.32
38	30.0	1203.8	1202.9	-0.9	3.77
39	35.0	1218.1	1218.0	-0.0	3.37
40	40.0	1231.5	1230.6	-0.8	3.07
41	45.0	1241.3	1241.3	-0.0	2.84
42	50.0	1251.1	1250.4	-0.7	2.66
43	54.0	1257.4	1256.9	-0.5	2.54

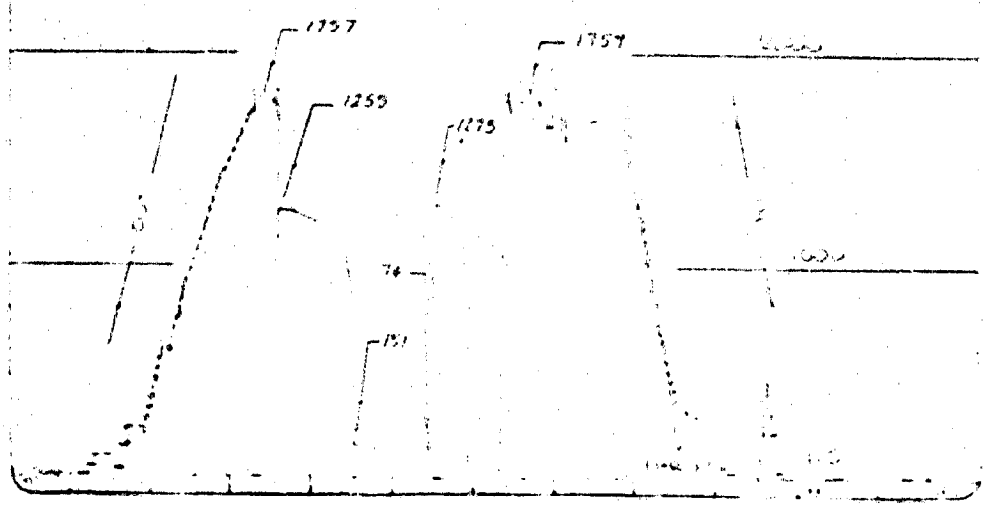
ASSUMPTIONS AND LIMITATIONS

THE ENCLOSED DST INTERPRETATION CALCULATIONS REQUIRE SEVERAL NECESSARY ASSUMPTIONS TO PROVIDE A QUICK ESTIMATE OF MANY OF THE FACTORS INVOLVED. AS A RESULT THE INFORMATION GAINED SHOULD BE USED TO FORM AN OPINION OR ESTIMATE ONLY, UNTIL THE ASSUMPTIONS OF RESERVOIR AND FLUID PROPERTIES CAN BE WHOLLY OR PARTIALLY CLARIFIED BY MORE COMPLETE ANALYSIS AND TESTING.


PRESSURE VS. TIME
DECALTA LRI ET AL KEELE RIVER
I-01
DST NO. ONE INSIDE RECORDER
PRESSURE
2400.0
2000.0
1600.0
1200.0
800.0
400.0
0.0
500.0
400.0
350.0
300.0
200.0
150.0
100.0
50.0
0.0
ELAPSED TIME (MINUTES)

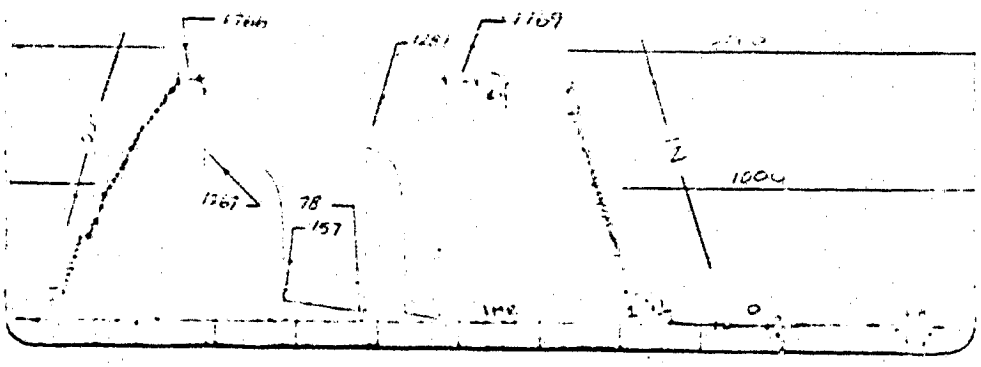

HORNER PRES. EXTRAPOLATION
DECALTA LAI ET AL KEELE RIVER
I-01
DST NO. ONE
Pw = 1384.2
1500.0
1425.0
1350.0
1275.0
1200.0
1125.0
1050.0
975.0
BOTTOM - HOLE PRESSURE (psig)
100
10
1
(T + Δt)/ Δt
ISI
FSI

Decalta L R I et al Keele River I-01
Ins. Rec. No. 2227
Test No. 1



DST RECORDER CHARTS

Decalta L R I et al Keele River I-01
Outs. Rec. No. 2011
Test No. 1



WESTERN DECALTA PETROLEUM LIMITED

SECTION III

DRILL STEM TEST REPORT

Company: Western Decalta Petroleum Limited Drill Stem Test No. 2

Name of Well: Decalta LRI et al Keele River I-01 Date Test Run: December 22, 1970

Testing Company: B. J. Services Operator: W. L. Budvarson

Type Packer: Dual Bottom Hole Size Packer(s): 6-1/2" Choke: 1/2"

Interval Tested: 3843' to 3684' Formation: Hume

Test Data: Preflow 5 mins.

Initial shut in: Time Packer set 3:00 AM. Time Tool Opened 3:27 AM. (elapsed) 27 mins.

Flow Period: Time Tool Opened 3:27 AM. Time Tool Closed 4:28 AM. (elapsed) 61 mins.

Final shut in: Time Tool Closed 4:28 AM. Time Tool Pulled 5:27 AM. (elapsed) 59 mins.

Tight Hole Test: Yes ____ No X Size of Chamber ____

Water Cushion: Nil Type of Hole: (Rathole) (Fullhole) (Cased)

T.D. Driller: 3843' T.D. Tester: 3843' Was Test A Misrun: No

Cause of Misrun: ____

Flow Data:

Description of Initial Blow: Good blow during preflow and throughout test.

Did Blow die or Decrease: Steady

Gas Flow To Surface In N/A mins. Initial Gas Flow ____ MCF/Day

Stabilized Gas Flow ____ MCF/Day Measured by: (Test) (Impact) (Side Static)

Time For Gas Flow to Stabilize ____ mins. Gas Description: (Sweet) (Sour) (Dry) (Wet)

Gas Sample Saved After ____ mins. Fluid To Surface In ____ mins.

Fluid Description: ____

Nature of Flow: ____

Remarks: ____

Recovery:

Total fluid in (size) 2-7/8" I.D. Collars OD drill pipe: 264 feet 2.16 barrels

(describe fluid) ____ Oil: ____ feet ____ barrels

____ Water: ____ feet ____ barrels

____ Mud: 264 feet 2.16 barrels

Saved Samples At: - ft. - ft. 0 ft. above the test tool

Weight of mud before test 9.2 lbs./gal.: Chloride content ____ ppm

Weight of mud recovered 8.8 lbs./gal.: Chloride content too low to measure ppm

Weight of water recovered ____ lbs./gal.: Chloride content ____ ppm

Oil Recovered: ____ °API Color ____ Smell ____

Pressure Data: @ 3686' K.B.

Initial Hydrostatic: (Office) 1805 (Field) ____ Final: (Office) 1802 (Field) ____

Initial Shut In Pressure 1393 Final: 1317

Initial Flow Pressure 49 Final: 146

Well Bore Temp: 80 °F Bomb Capacity: Top 3600# Bottom 5500#

Engineer: D. A. Crawford

BJ BORG WARNER

TESTING REPORT

DRILL-STEM TEST DATA

Well Name DECALTA LRI ET AL KEELE RIVER — Test No TWO

Well Number I-01 — Zone Tested CRETACEOUS

Company WESTERN DECALTA PETROLEUM LTD. — Interval 3684 3843

Comp Rep W.R. SMITH — Tester B. BUDUARSON — Date DEC. 22, 1970

Type of Test DUAL BOTTOM HOLE — R.F.S. Tool No 23(DRAINED ON LOCATION)

Preflow 5 mins ISI 27 mins Flow 61 mins FSI 59 mins

	I REC No 2227	O REC No 2011	REC No
	3600 RANGE 12 HR CLOCK	5500 RANGE 12 HR CLOCK	RANGE HR CLOCK
DEPTH	3667	3686	
Initial Hydro Mud Press	1790	1805	
Initial Shut-in Press	1376	1393	
Initial Flow Press	46	49	
Final Flow Press	134	146	
Final Shut-in Press	1302	1317	
Final Hydro Mud Press	1790	1802	

Mud Drop NIL — Fluid Loss 7.6 — Mud Weight 9.2

Viscosity 60 — Temperature °F 80 — Net Pay Tested

Top Packer Depth 3678 — Bottom Packer Depth 3684 — Total Depth 3843

Drill Pipe Size 4.5 X.H. — Wt 16.60 — Drill Collar I.D. 2.875 — Ft Run 534

Surface Choke Size OPEN — Bottom Choke Size 0.5 — Main Hole Size 7.875

Anchor Size 4.75 O.D. — Rat Hole Size — Feet of Rat Hole

Cushion Amount — Type — Rubber Size 6.5

Fluid Recovery Total Feet 264

Recovered 264 Feet of DRILLING MUD

Recovered Feet of

Recovered Feet of

Recovered Feet of

Recovered Feet of

Gas Recovery — How Measured — Riser size

mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day

Bleed-Off Time for Drill Pipe 42 MIN.

REMARKS GOOD BLOW DURING PREFLOW & THROUGHOUT TEST.

A Core Lab. Gas Cont. No

Chem - Geo Lab Gas Cont. No.

December 22, 1970 #2

DECALTA LRI KEELER #1-01 **TESTING REPORT**

45 LANDING SUB		
45 CHAMBER		
P.O SUB	1.00	
CO SUB	1.00	
SHUT IN TOOL	5.20	
R.F.S. No	3.50	
R.F.S. No		
HYDRAULIC TOOL	7.15	
JARS SUTLIFF #19	5.50	
RECORDER No INS. 2227	5.00	DEPTH 3667
RECORDER No.		DEPTH
SAFETY JOINT	1.75	
BY PASS SUB		
1. PACKER DEPTH 3678 — PACKER	6.00	
2. PACKER DEPTH 3684 — PACKER	5.00	TOTAL TOOL ABOVE INTERVAL 41.10
ANCHOR—SPECIFY	1.00	
BLANK OFF OR BY PASS SUB		
RECORDER No OUTS 2011	5.00	DEPTH 3686
PERFS	19.00	
3. PACKER DEPTH — PACKER		TOTAL INTERVAL 159.00
4. PACKER DEPTH — PACKER		
ANCHOR—SPECIFY		
D.C. & C.O. SUBS	126.00	
RECORDER No		DEPTH
PERFS	5.00	
TOTAL DEPTH 3843 — BULLNOSE	3.00	TOTAL TAIL PIPE 159.00
		TOTAL TEST TOOL 75.10

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS

B HIGH PERMEABILITY STRONG DAMAGE EFFECT | HIGH PERMEABILITY NO DAMAGE EFFECT | MEDIUM PERMEABILITY STRONG DAMAGE EFFECT | MEDIUM PERMEABILITY NO DAMAGE EFFECT | LOW PERMEABILITY STRONG DAMAGE EFFECT | LOW PERMEABILITY NO DAMAGE EFFECT

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

LOCATION I-01 REC. NO. 2227 DEPTH 3667.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
RUNNING IN HOLE	1	0.0	0.0
	2	45.0	579.5
	3	60.0	265.9
	4	70.0	266.8
	5	115.0	1783.7
	6	137.0	1786.4
	7	139.0	1790.0
INITIAL HYDROSTATIC PRESSURE	8	145.0	1790.0
FIRST FLOW PERIOD	9	145.0	37.1
FINAL FLOWING PRESSURE	10	150.0	35.3
BUILD-UP AFTER FIRST FLOW	11	150.0	35.3
	12	151.0	1112.6
	13	153.0	1268.1
	14	155.0	1293.1
	15	160.0	1343.2
	16	165.0	1360.1
	17	170.0	1369.1
	18	175.0	1374.4
INITIAL SHUT-IN PRESSURE	19	177.0	1376.2
FINAL FLOW PERIOD	20	177.0	1376.2
	21	178.0	1170.7
	22	179.0	881.6
	23	180.0	523.0
INITIAL FLOWING PRESSURE	24	181.0	45.9
	25	182.0	45.9
	26	187.0	49.5
	27	192.0	59.2
	28	197.0	68.0
	29	202.0	78.6
	30	207.0	80.3
	31	212.0	94.5
	32	217.0	103.4
	33	222.0	110.4
	34	227.0	120.1
	35	232.0	129.0
	36	237.0	134.3
FINAL FLOWING PRESSURE	37	238.0	134.3

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

LOCATION I-01 REC. NO. 2227 DEPTH 3667.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
BUILD-UP AFTER FINAL FLOW	38	238.0	134.3
	39	243.0	1076.6
	40	248.0	1157.3
	41	253.0	1198.4
	42	258.0	1225.2
	43	263.0	1243.1
	44	268.0	1257.4
	45	273.0	1269.0
	46	278.0	1277.9
	47	283.0	1286.0
	48	288.0	1292.2
	49	293.0	1297.6
FINAL SHUT-IN PRESSURE	50	297.0	1302.1
FINAL HYDROSTATIC PRESSURE	51	297.0	1790.0
PULLING OUT OF HOLE	52	307.0	1790.0
OUT	53	438.0	0.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

LOCATION I-01 REC. NO. 2221 DEPTH 3667.

CALCULATIONS FOR LIQUID RECOVERY (FIRST SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE	1403.1
NO. OF POINTS CONSIDERED IN BUILD-UP	5
NO. OF POINTS USED IN EXTRAPOLATION	4
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI).....	0.58
EFFECTIVE PRODUCING TIME (MIN)	5.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

LOCATION I-01 REC. NO. 2227 DEPTH 3667.

DATA FOR BUILD-UP PLOT (FIRST SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
12	1.0	1112.6			6.00
13	3.0	1268.1			2.67
14	5.0	1293.1			2.00
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
15	10.0	1343.2			1.50
POINTS USED IN EXTRAPOLATION					
16	15.0	1360.1	1357.5	-2.7	1.33
17	20.0	1369.1	1367.7	-1.4	1.25
18	25.0	1374.4	1374.2	-0.3	1.20
19	27.0	1376.2	1376.1	-0.1	1.19

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

LOCATION I-01 REC. NO. 2227 DEPTH 3667.

CALCULATIONS FOR LIQUID RECOVERY (SECOND SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE	1383.2
NO. OF POINTS CONSIDERED IN BUILD-UP	7
NO. OF POINTS USED IN EXTRAPOLATION	5
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)	0.27
EFFECTIVE PRODUCING TIME (MIN)	66.0
(B) IN SITU CAPACITY (KH - MD FT)	30.10
SLOPE OF BUILD-UP CURVE (PSI/CYCLE)	249.67
PRODUCING RATE (BBL/DAY)	46.25
FLUID VISCOSITY (CP)	1.000
FORMATION VOLUME FACTOR (RES BBL/ST BBL)	1.000
(C) EFFECTIVE PERMEABILITY (MD)	0.19
FORMATION THICKNESS	159.00
(D) PRODUCTIVITY INDEX (BBL/DAY/PSI)	0.04
FLOWING PRESSURE (PSIG)	134.3
(E) APPROXIMATE DRAINAGE RADIUS (FT)	11.7
TOTAL FLOWING TIME (MIN)	66.0
(F) ESTIMATED DAMAGE RATIO	1.61
RESERVOIR POROSITY (PERCENT)	25.00
TOTAL COMPRESSIBILITY (VOL/VOL/PSI X 10-6)	6.40
WELL-BORE RADIUS (IN)	3.94
CALCULATED SKIN FACTOR	2.47
(G) PRODUCTION WITH DAMAGE REMOVED (BBL/DAY)	74.6

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. TWO

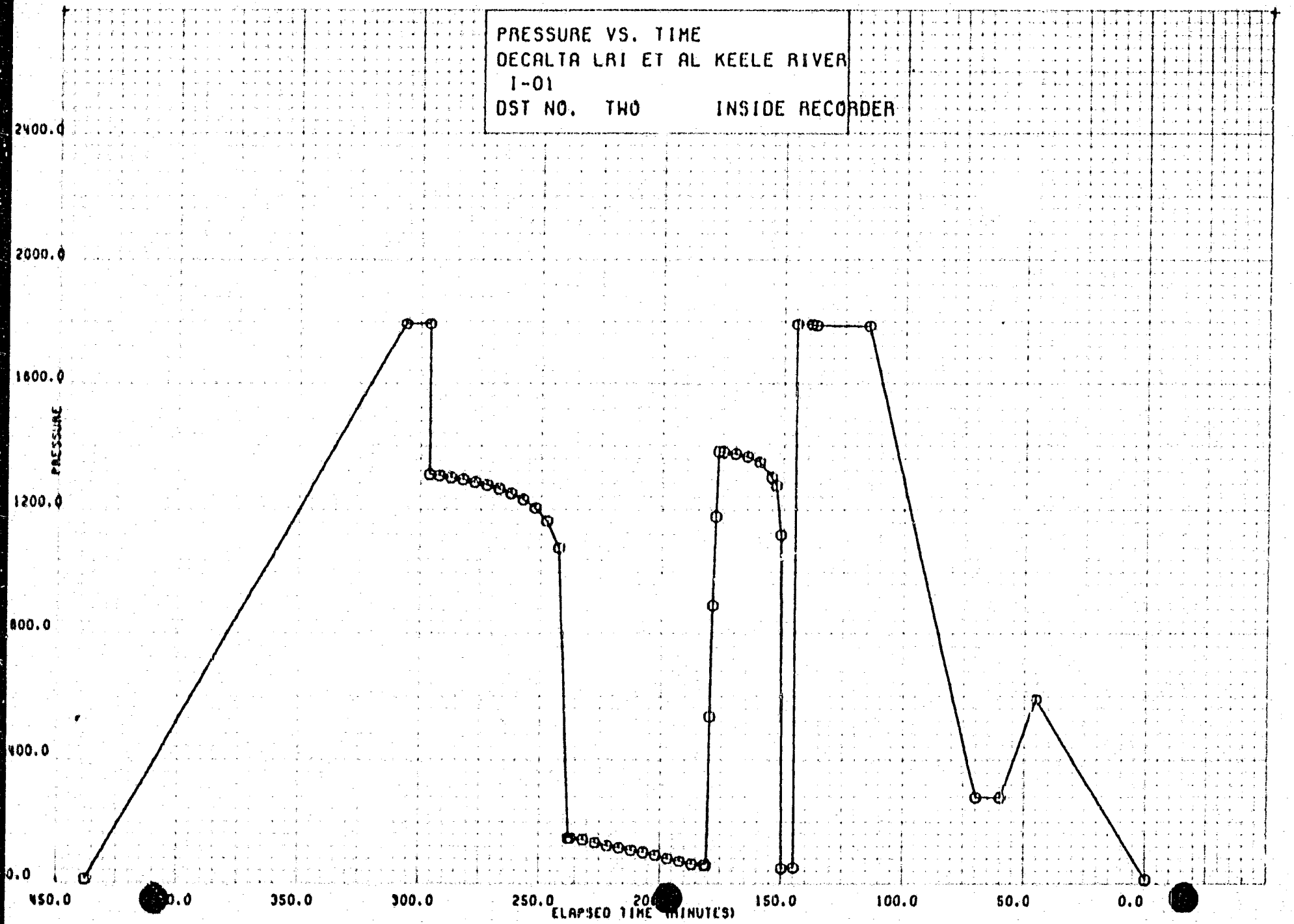
LOCATION I-02 REC. NO. 2227 DEPTH 3667.

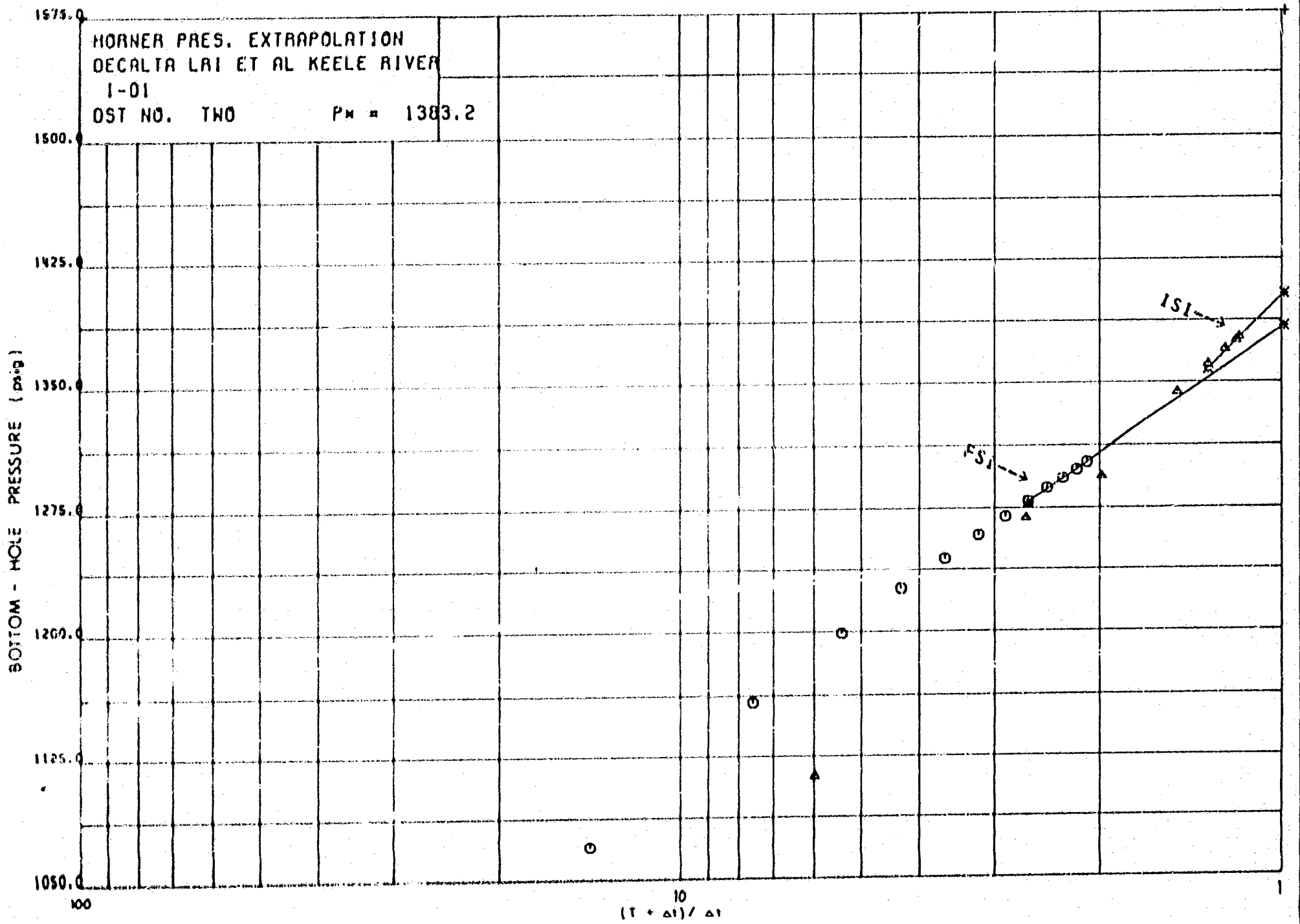
DATA FOR BUILD-UP PLOT (SECOND SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSUR DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
39	5.0	1070.6			14.20
40	10.0	1157.3			7.60
41	15.0	1198.4			5.40
42	20.0	1225.2			4.30
43	25.0	1243.1			3.64
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
44	30.0	1257.4			3.20
45	35.0	1269.0			2.89
POINTS USED IN EXTRAPOLATION					
46	40.0	1277.9	1277.6	-0.4	2.65
47	45.0	1286.0	1285.3	-0.6	2.47
48	50.0	1292.2	1292.0	-0.2	2.32
49	55.0	1297.6	1297.7	0.1	2.20
50	59.0	1302.1	1301.8	-0.2	2.12

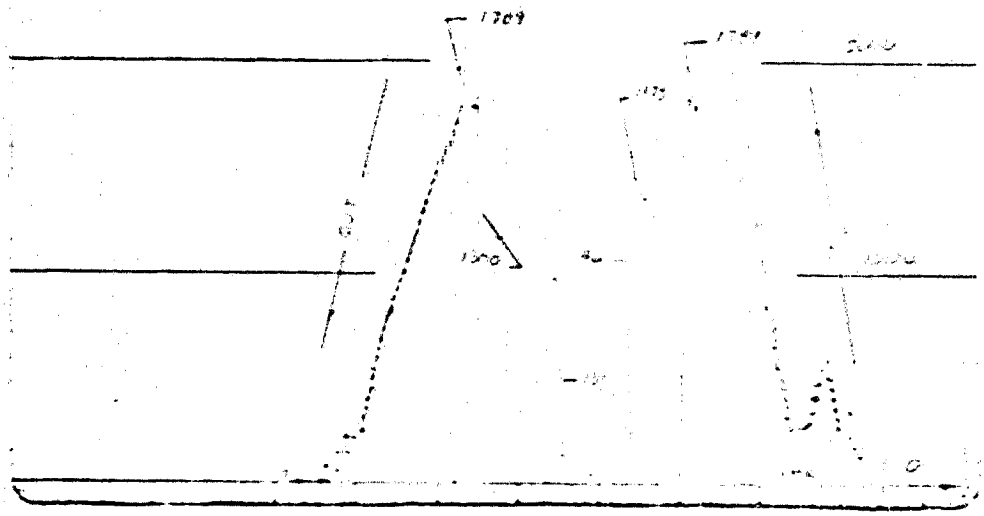
ASSUMPTIONS AND LIMITATIONS

THE ENCLOSED DST INTERPRETATION CALCULATIONS REQUIRE SEVERAL NECESSARY ASSUMPTIONS TO PROVIDE A QUICK ESTIMATE OF MANY OF THE FACTORS INVOLVED. AS A RESULT THE INFORMATION GAINED SHOULD BE USED TO FORM AN OPINION OR ESTIMATE ONLY. UNTIL THE ASSUMPTIONS OF RESERVOIR AND FLUID PROPERTIES CAN BE WHOLLY OR PARTIALLY CLARIFIED BY MORE COMPLETE ANALYSIS AND TESTING.


PRESSURE VS. TIME
DECALTA LRI ET AL KEELE RIVER
I-01
DST NO. TWO INSIDE RECORDER
2400.0
2000.0
1600.0
1200.0
800.0
400.0
0.0
PRESSURE
450.0
350.0
300.0
250.0
150.0
100.0
50.0
0.0
ELAPSED TIME (MINUTES)

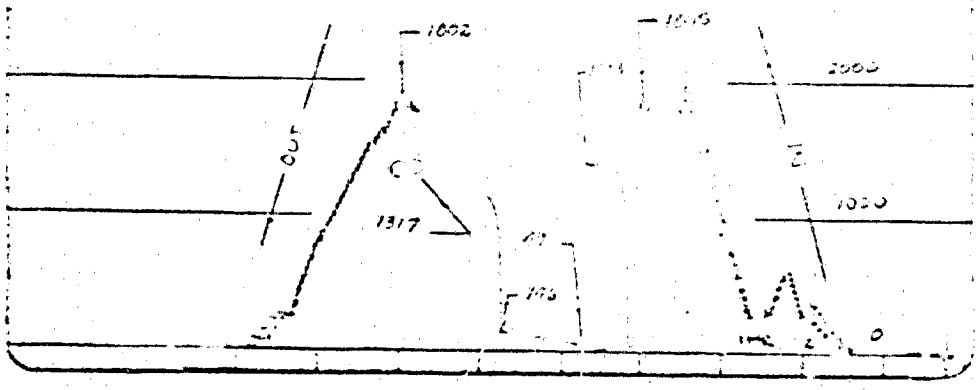

MORNER PRES. EXTRAPOLATION
DECALTA LAI ET AL KEELE RIVER
I-01
DST NO. TWO
PM = 1383.2
1575.0
1500.0
1425.0
1350.0
1275.0
1200.0
1125.0
1050.0
BOTTOM - HOLE PRESSURE (psig)
100
10
1
(T + Δt) / Δt
ISI
FSI

Decalta L R I et al Keele River I-01
Ins. Rec. No. 2227
Test No. 2



DST RECORDER CHARTS

Decalta L R I et al Keele River I-01
Outs. Rec. No. 2011
Test No. 2



WESTERN DECALTA PETROLEUM LIMITED

SECTION III **DRILL STEM TEST REPORT**

Company: Western Decalta Petroleum Limited — Drill Stem Test No. 3

Name of Well: Decalta LRI et al Keele River I-01 — Date Test Run: December 26, 1970

Testing Company: B. J. Services — Operator: W. L. Budvarson

Type Packer: Dual Bottom Hole — Size Packer(s): 6-1/2" — Choke 1/2"

Interval Tested: 4165' to 4220' — Formation: Bear Rock

Test Data:

Preflow 5 mins.

Initial shut in: Time Packer set 2:19 P.M. Time Tool Opened 2:42 P.M. (elapsed) 23 mins.

Flow Period: Time Tool Opened 2:42 P.M. Time Tool Closed 3:44 P.M. (elapsed) 62 mins.

Final shut in: Time Tool Closed 3:44 P.M. Time Tool Pulled 4:42 P.M. (elapsed) 58 mins.

Tight Hole Test: Yes ____ No X Size of Chamber ____

Water Cushion: Nil — Type of Hole: (Rathole) (Fullhole) (Cased)

T.D. Driller: 4220' — T.D. Tester: 4220' — Was Test A Misrun: No

Cause of Misrun: ____

Flow Data:

Description of Initial Blow: Fair blow throughout test.

Did Blow die or Decrease: Decreased slightly.

Gas Flow To Surface In N/A mins. — Initial Gas Flow ____ MCF/Day

Stabilized Gas Flow ____ MCF/Day — Measured by: (Test) (Impact) (Side Static)

Time For Gas Flow to Stabilize ____ mins. — Gas Description: (Sweet) (Sour) (Dry) (Wet)

Gas Sample Saved After ____ mins. — Fluid To Surface In ____ mins.

Fluid Description: ____

Nature of Flow: ____

Remarks: ____

Recovery:

Total fluid in (size) 2-7/8" I.D. Collar ⊗D drill pipe: 522 feet 4.3 barrels

(describe fluid) ____ Oil: ____ feet ____ barrels

gas and mud cut salt Water: 258 feet 2.12 barrels

Mud: 264 feet 2.18 barrels

Saved Samples At: 174 ft. 64 ft. 0 ft. above the test tool

Weight of mud before test 9.4 lbs./gal.: Chloride content TSTM ppm

Weight of mud recovered ____ lbs./gal.: Chloride content ____ ppm

Weight of water recovered 8.5 lbs./gal.: Chloride content 21,100 ppm

Oil Recovered: ____ °API Color ____ Smell ____

Pressure Data: @ 4167' K.B.

Initial Hydrostatic: (Office) 2087 (Field) ____ Final: (Office) 2087 (Field) ____

Initial Shut In Pressure 1596 Final: 1480

Initial Flow Pressure 101 Final: 281

Well Bore Temp: 118 °F — Bomb Capacity: Top 3600# Bottom 5500#

Engineer: D. A. Crawford

TESTING REPORT

DRILL-STEM TEST DATA

Well Name DECALTA LRI ET AL KEELE RIVER — Test No 3

Well Number I-01 — Zone Tested CRETACEOUS

Company WESTERN DECALTA PETROLEUM LTD. — Interval 4165 4220

Comp Rep W.R. SMITH — Tester B. BUDUARSON — Date DEC. 26, 1970

Type of Test DUAL BOTTOM HOLE — RFS Tool No 23 (TO CORE LAB EDM.)

Preflow 5 mins ISI 23 mins Flow 62 mins FSI 58 mins

	I HP No 2227		U HP No 2011		HP No	
	3600 RANGE	12 HR CLOCK	5500 RANGE	12 HR CLOCK	RANGE	HR CLOCK
DEPTH		4148		4167		
Initial Hydro Mud Press		2080		2087		
Initial Shut-in Press		1588		1596		
Initial Flow Press		95		101		
Final Flow Press		275		281		
Final Shut-in Press		1475		1480		
Final Hydro Mud Press		2080		2087		

Mud Drop NIL — Fluid Loss 7.2 — Mud Weight 7.4

Viscosity 68 — Temperature °F 118 — Net Pay Tested

Top Packer Depth 4159 — Bottom Packer Depth 4165 — Total Depth 4220

Drill Pipe Size 4.5 X.H. — Wt 16.60 — Drill Collar I.D. 2.875 — Ft Run 534

Surface Choke Size OPEN — Bottom Choke Size 0.5 — Main Hole Size 7.875

Anchor Size 4.75 O.D. — Rat Hole Size — Feet of Rat Hole

Cushion Amount — Type — Rubber Size 6.5

Fluid Recovery Total Feet 534

Recovered 264 Feet of MUD

Recovered 174 Feet of GAS CUT, MUD CUT, SALT WATER (21,100 PPM)

Recovered 84 Feet of GAS CUT, MUD CUT, SALT WATER

Recovered Feet of

Recovered Feet of

Gas Recovery — Flow Measured — Riser size

mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day
mins	Temp °F	Press Rdg	psi	Orifice Size	=	MCF/Day

Bleed Off Time for Drill Pipe 15 MIN.

REMARKS FAIR BLOW THROUGHOUT TEST.

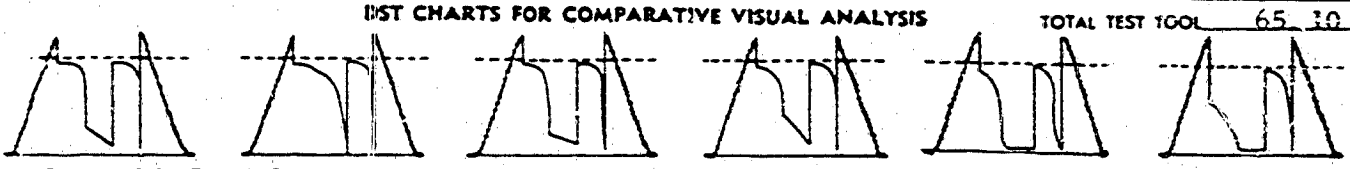
A Core Lab Gas Cont No — Chem - Geo. Lab Gas Cont No

December 26, 1970 #3

DECALTA LRI KEELE R. #1-01 **TESTING REPORT**

45 LANDING SUB		
45 Chamber		
P.O SUB	1.00	
CO SUB	1.00	
SHUT IN TOOL	5.20	
R.P.S. No 23	3.50	
R.P.S. No		
HYDRAULIC TOOL	7.15	
JARS SUTLIFF #19	5.50	
RECORDER No 2227	5.00	DEPTH 4148
RECORDER No		DEPTH
SAFETY JOINT	1.75	
BY PASS SUB		
1. PACKER DEPTH 4159 — PACKER	6.00	
2. PACKER DEPTH 4165 — PACKER	5.00	TOTAL TOOL ABOVE INTERVAL 41.10
ANCHOR—SPECIFY	1.00	
BLANK OFF OR BY PASS SUB		
RECORDER No 2011	5.00	DEPTH 4167
3. PACKER DEPTH — PACKER		TOTAL INTERVAL 55.00
4. PACKER DEPTH — PACKER		
ANCHOR—SPECIFY		
PERFS	15.00	
RECORDER No		DEPTH
D.C. & C.O. SUBS	31.00	
TOTAL DEPTH 4220 — BULLNOSE	3.00	TOTAL TAIL PIPE 55.00
		TOTAL TEST TOOL 65.10

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS



B HIGH PERMEABILITY STRONG DAMAGE EFFECT | HIGH PERMEABILITY NO DAMAGE EFFECT | MEDIUM PERMEABILITY STRONG DAMAGE EFFECT | MEDIUM PERMEABILITY NO DAMAGE EFFECT | LOW PERMEABILITY STRONG DAMAGE EFFECT | LOW PERMEABILITY NO DAMAGE EFFECT

POOR COPY

WELL NAME DECALTA LRI ET AL KEELE RIVER TEST. NO. 3

LOCATION I-01 REC. NO. 2227 DEPTH 4148.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
RUNNING IN HOLE	1	0.0	0.0
	2	30.0	553.9
	3	205.0	556.5
	4	247.0	2080.0
INITIAL HYDROSTATIC PRESSURE	5	263.0	2080.0
FIRST FLOW PERIOD	6	263.0	45.1
FINAL FLOWING PRESSURE	7	268.0	50.4
BUILD-UP AFTER FIRST FLOW	8	268.0	50.4
	9	269.0	1500.4
	10	270.0	1513.9
	11	273.0	1539.8
	12	278.0	1562.1
	13	283.0	1575.5
	14	288.0	1584.4
INITIAL SHUT-IN PRESSURE	15	291.0	1588.0
FINAL FLOW PERIOD	16	291.0	1588.0
INITIAL FLOWING PRESSURE	17	296.0	95.4
	18	301.0	95.4
	19	306.0	138.7
	20	311.0	154.6
	21	316.0	169.6
	22	326.0	203.2
	23	341.0	250.9
	24	346.0	265.9
	25	351.0	265.9
FINAL FLOWING PRESSURE	26	353.0	274.7
BUILD-UP AFTER FINAL FLOW	27	353.0	274.7
	28	354.0	1168.0
	29	356.0	1215.4
	30	358.0	1248.4
	31	363.0	1302.1
	32	368.0	1338.7
	33	373.0	1366.4
	34	378.0	1388.7
	35	383.0	1407.5
	36	388.0	1423.6

WELL NAME DECALTA LAI ET AL KEELE-RIVER TEST. NO. 3

LOCATION I-01 REC. NO. 2227 DEPTH 4148.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
	37	393.0	1437.9
	38	398.0	1450.4
	39	403.0	1461.1
	40	408.0	1471.0
FINAL SHUT-IN PRESSURE	41	411.0	1475.4
FINAL HYDROSTATIC PRESSURE	42	411.0	2080.0
PULLING OUT OF HOLE	43	428.0	2080.0
OUT	44	486.0	0.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 3

LOCATION I-01 REC. NO. 2227 DEPTH 4148.

CALCULATIONS FOR LIQUID RECOVERY (FIRST SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE 1614.6

NO. OF POINTS CONSIDERED IN BUILD-UP 2
NO. OF POINTS USED IN EXTRAPOLATION 4
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)..... 1.06
EFFECTIVE PRODUCING TIME (MIN) 5.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 3

LOCATION I-01 REC. NO. 2227 DEPTH 4148.

DATA FOR BUILD-UP PLOT (FIRST SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T*DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
9	1.0	1500.4			6.00
10	2.0	1513.9			3.50
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
11	5.0	1539.8			2.00
POINTS USED IN EXTRAPOLATION					
12	10.0	1562.1	1558.6	-3.5	1.50
13	15.0	1575.5	1574.9	-0.6	1.33
14	20.0	1584.4	1583.8	-0.7	1.25
15	23.0	1588.0	1587.4	-0.6	1.22

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 3

LOCATION I-01 REC. NO. 2227 DEPTH 4148.

CALCULATIONS FOR LIQUID RECOVERY (SECOND SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE	1609.0
NO. OF POINTS CONSIDERED IN BUILD-UP	9
NO. OF POINTS USED IN EXTRAPOLATION	6
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)	0.65
EFFECTIVE PRODUCING TIME (MIN)	67.0
(B) IN SITU CAPACITY (KH - MD FT)	37.31
SLOPE OF BUILD-UP CURVE (PSI/CYCLE)	401.38
PRODUCING RATE (BBL/DAY)	92.16
FLUID VISCOSITY (CP)	1.000
FORMATION VOLUME FACTOR (RES BBL/ST BBL)	1.000
(C) EFFECTIVE PERMEABILITY (MD)	0.68
FORMATION THICKNESS	55.00
(D) PRODUCTIVITY INDEX (BBL/DAY/PSI)	0.07
FLOWING PRESSURE (PSIG)	274.7
(E) APPROXIMATE DRAINAGE RADIUS (FT)	22.3
TOTAL FLOWING TIME (MIN)	67.0
(F) ESTIMATED DAMAGE RATIO	0.91
RESERVOIR POROSITY (PERCENT)	25.00
TOTAL COMPRESSIBILITY (VOL/VOL/PSI X 10-6)	6.40
WELL-BORE RADIUS (IN)	3.94
CALCULATED SKIN FACTOR	-0.10

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 3

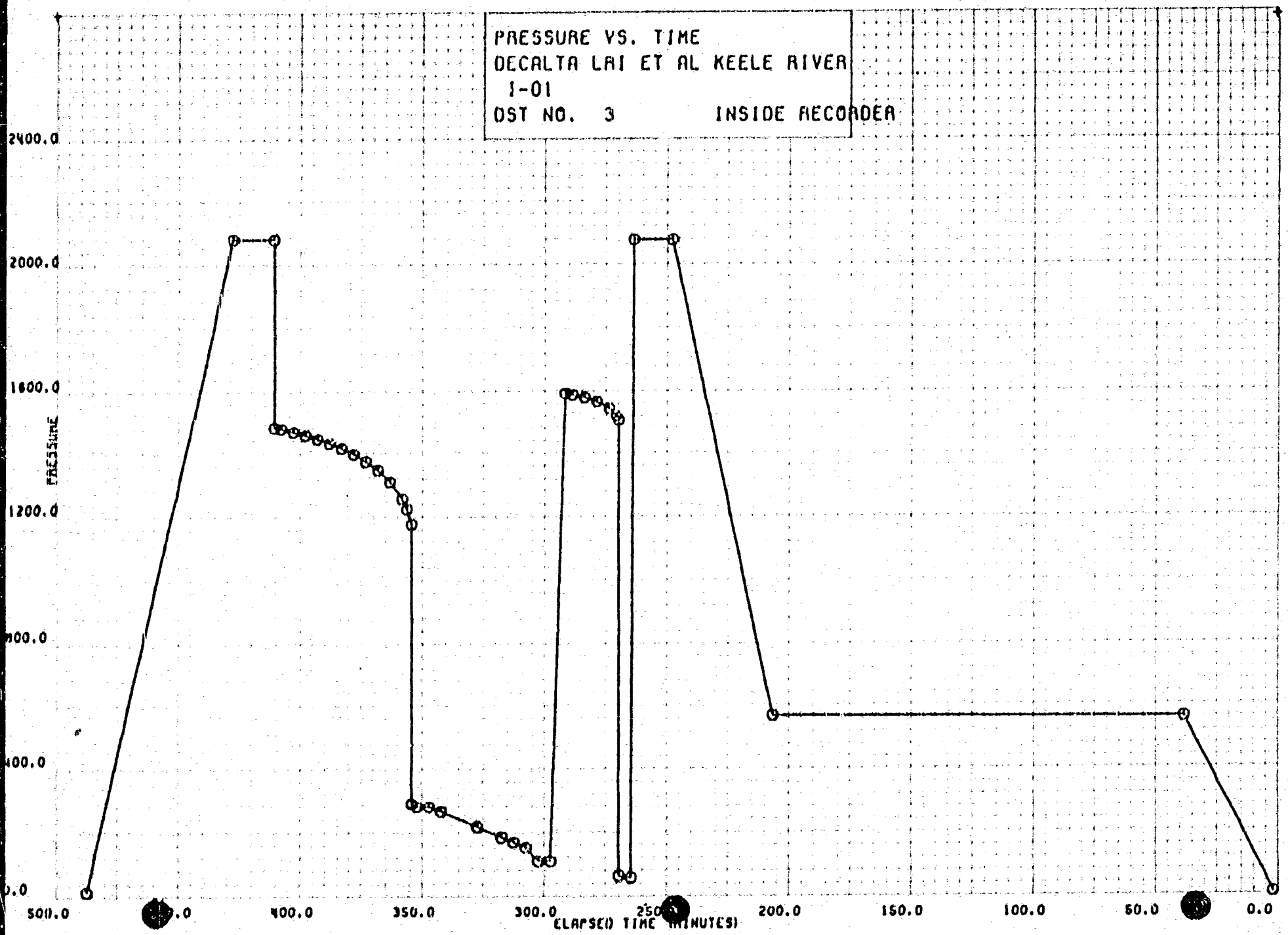
LOCATION I-01 REC. NO. 2227 DEPTH 4148.

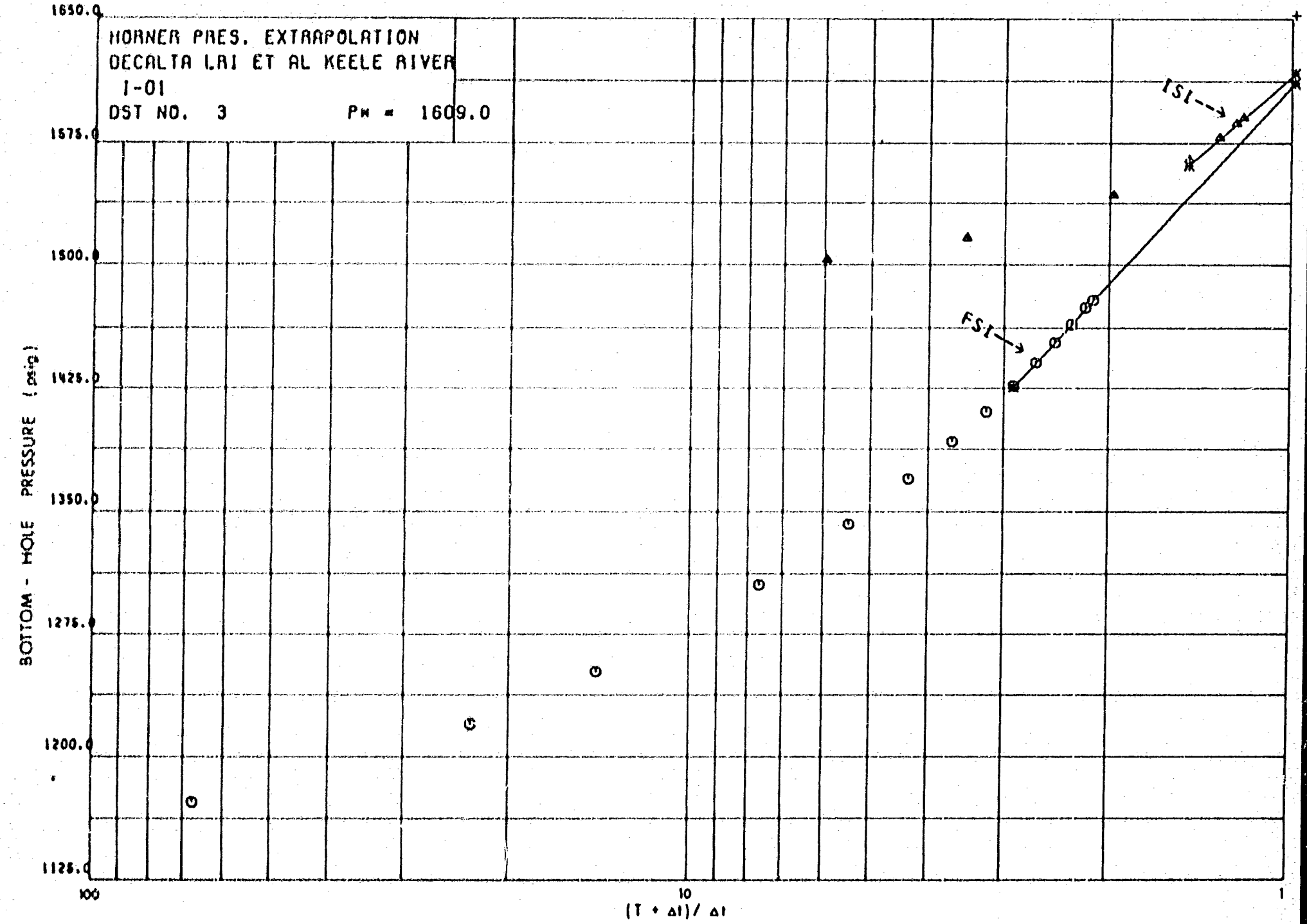
DATA FOR BUILD-UP PLOT (SECOND SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
28	1.0	1168.0			68.00
29	3.0	1215.4			23.33
30	5.0	1248.4			14.40
31	10.0	1302.1			7.70
32	15.0	1338.7			5.47
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
33	20.0	1366.4			4.35
34	25.0	1388.7			3.68
35	30.0	1407.5			3.23
POINTS USED IN EXTRAPOLATION					
36	35.0	1423.0	1422.6	-1.0	2.91
37	40.0	1437.9	1437.5	-0.4	2.67
38	45.0	1450.4	1450.1	-0.3	2.49
39	50.0	1461.1	1460.8	-0.3	2.34
40	55.0	1471.0	1470.2	-0.8	2.22
41	58.0	1475.4	1475.2	-0.2	2.16

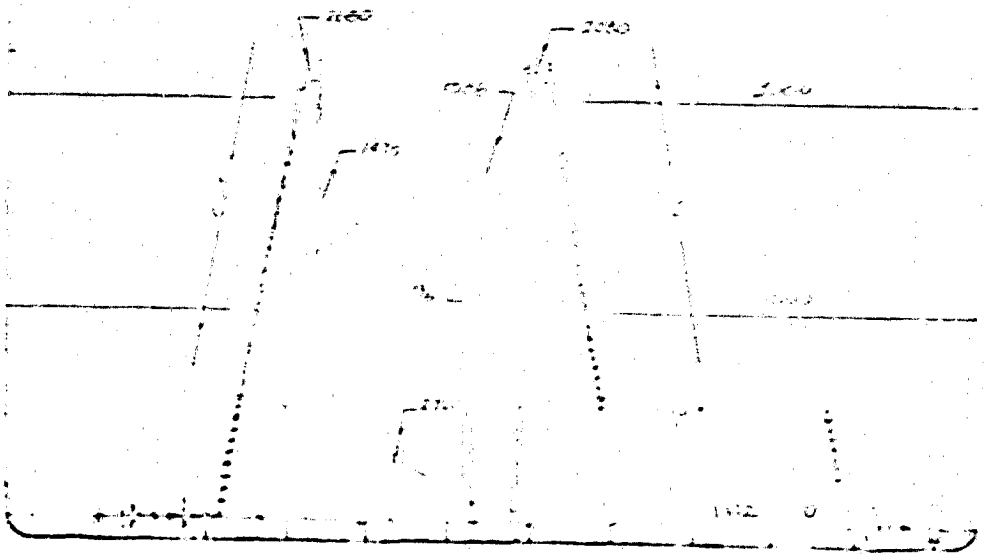
ASSUMPTIONS AND LIMITATIONS

THE ENCLOSED DST INTERPRETATION CALCULATIONS REQUIRE SEVERAL NECESSARY ASSUMPTIONS TO PROVIDE A QUICK ESTIMATE OF MANY OF THE FACTORS INVOLVED. AS A RESULT THE INFORMATION GAINED SHOULD BE USED TO FORM AN OPINION OR ESTIMATE ONLY, UNTIL THE ASSUMPTIONS OF RESERVOIR AND FLUID PROPERTIES CAN BE WHOLLY OR PARTIALLY CLARIFIED BY MORE COMPLETE ANALYSIS AND TESTING.


PRESSURE VS. TIME
DECALTA LAI ET AL KEELE RIVER
I-01
DST NO. 3 INSIDE RECORDER
PRESSURE
2400.0
2000.0
1600.0
1200.0
ELAPSED TIME (MINUTES)
200.0
150.0
100.0
50.0
0.0

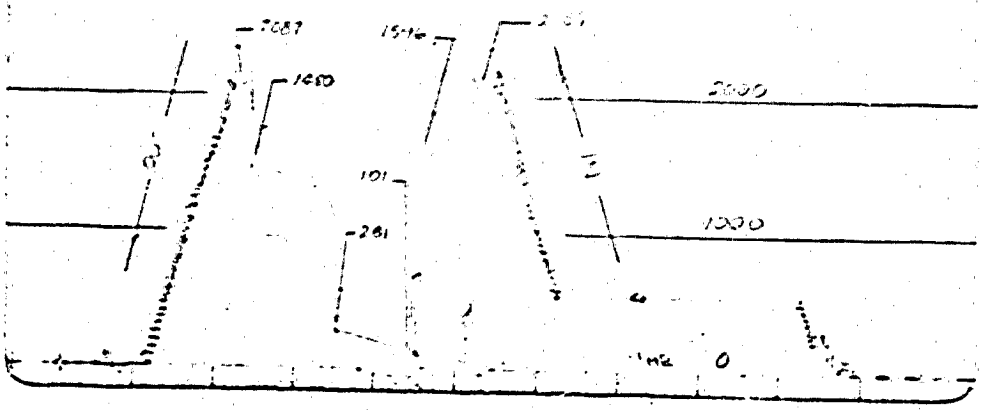

HORNER PRES. EXTRAPOLATION
DECALTA LRI ET AL KEELE RIVER
I-01
DST NO. 3
PH = 1609.0
ISI
FSI
1650.0
1575.0
1500.0
1425.0
1350.0
1275.0
1200.0
1125.0
BOTTOM - HOLE PRESSURE (psig)
100
10
1
(T + Δt)/ Δt

Decalta L R I et al Keele River I-01
Ins. Rec. No. 2227
Test No. 3



DST RECORDER CHARTS

Decalta L R I et al Keele River I-01
Outs. Rec. No. 2011
Test No. 3



WESTERN DECALTA PETROLEUM LIMITED

SECTION III

DRILL STEM TEST REPORT

Company: Western Decalta Petroleum Limited — Drill Stem Test No. 4

Name of Well: Decalta LRI et al Keele River I-01 — Date Test Run: January 6, 1971

Testing Company: B. J. Services — Operator: W. L. Budvarson

Type Packer: Dual Bottom Hole — Size Packer(s): 6-1/2" — Choke: 1/2"

Interval Tested: 4987' to 5600' — Formation: Bear Rock

Test Data: Preflow 5 mins

Initial shut in: Time Packer set 12:29 P.M. Time Tool Opened 12:49 P.M. (elapsed) 20 mins.

Flow Period: Time Tool Opened 12:49 P.M. Time Tool Closed 1:55 P.M. (elapsed) 66 mins.

Final shut in: Time Tool Closed 1:55 P.M. Time Tool Pulled 2:55 P.M. (elapsed) 60 mins.

Tight Hole Test: Yes ____ No X Size of Chamber ____

Water Cushion: Nil — Type of Hole: (Rathole) (Fullhole) (Cased)

T.D. Driller: 5600 — T.D. Tester: 5600 — Was Test A Misrun: No

Cause of Misrun: ____

Flow Data:

Description of Initial Blow: Fair blow throughout test.

Did Blow die or Decrease: Decreased slightly

Gas Flow To Surface In N/A mins. — Initial Gas Flow ____ MCF/Day

Stabilized Gas Flow ____ MCF/Day — Measured by: (Test) (Impact) (Side Static)

Time For Gas Flow to Stabilize ____ mins. — Gas Description: (Sweet) (Sour) (Dry) (Wet)

Gas Sample Saved After ____ mins. — Fluid To Surface In ____ mins.

Fluid Description: ____

Nature of Flow: ____

Remarks: ____

Recovery:

Total fluid in (size) 2-7/8" I.D. Collars OD drill pipe: 90 feet .74 barrels

(describe fluid) ____ Oil: ____ feet ____ barrels

____ Water: ____ feet ____ barrels

____ Mud: 90 feet .74 barrels

Saved Samples At: 90 ft. - ft. 0 ft. above the test tool

Weight of mud before test 9.8 lbs./gal.: Chloride content TSTM ppm

Weight of mud recovered 9.6 lbs./gal.: Chloride content TSTM ppm

Weight of water recovered ____ lbs./gal.: Chloride content ____ ppm

Oil Recovered: ____ °API Color ____ Smell ____

Pressure Data: @ 5080' K.B.

Initial Hydrostatic: (Office) 2687 (Field) ____ Final: (Office) 2688 (Field) ____

Initial Shut In Pressure 1940 ____ Final: 1733 ____

Initial Flow Pressure 108 ____ Final: 140 ____

Well Bore Temp: 138 °F — Bomb Capacity: Top 3600# Bottom 5500#

Engineer: D. A. Crawford

TESTING REPORT

DRILL-STEM TEST DATA

Well Name DECALTA LRI ET AL KEELE RIVER — Test No 4

Well Number I-01 — Zone Tested CRETACEOUS

Company WESTERN DECALTA PETROLEUM LTD. — Interval 4987 6000

Comp. Rep W. R. SMITH — Tester B. HUDUARSON — Date JAN. 6, 1971

Type of Test DUAL BOTTOM HOLE — RTS Test No 28 (CORE LAB FDM.)

Preflow 5 mins — Initial Flow 20 mins — Final Flow 60 mins — Final SI 60 mins

	I Hr. No. 2227	O Hr. No. 2011	Hr. No.	
	3600 Range 12 Hr. Clock	5500 Range 12 Hr. Clock	Range	Hr. Clock
DEPTH	4970	5080		
Initial Hydro. Mud Press	2631	2687		
Initial Shut-in Press	1878	1940		
Initial Flow Press	49	108		
Final Flow Press	79	140		
Final Shut-in Press	1872	1733		
Final Hydro. Mud Press	2621	2688		

Mud Type NIL — Viscosity 110 — Mud Loss 7.6 — Temperature 138 — Mud Weight 7.8 — Est. Pay Tested EST 30

Top Packer Depth 4981 — Bottom Packer Depth 4987 — Total Depth 5600

Drill Pipe Size 4.5 X.H. — Hole 16.60 — Drill Collar O.D. 2.875 — Hole 534

Bottom Choke Size OPEN — Bottom Choke Size 0.5 — Main Hole Size 7.875

Anchor Size — Hole Size — Feet of Rat Hole

Length Anchored — Type — Rubber Size 6.5

Mud Recovery Drill Pipe 90

Recovered 90 — Feet of DRILLING MUD

Recovered — Feet of

Recovered — Feet of

Recovered — Feet of

Recovered — Feet of

Gas Measurement — Flow Measurement — Flow Size

mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day
mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day
mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day
mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day
mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day
mins	Temp. F	Press. Rdg	psi	Orifice Size		MCF Day

Bleed Off Time for Drill Pipe 24 MIN.

REMARKS FAIR BLOW THROUGHOUT TEST.
NOTE- PERF. FROM 5050 - 5080 FT.

A Core Lab Gas Cont. No — Chem. Geo. Lab Gas Cont. No

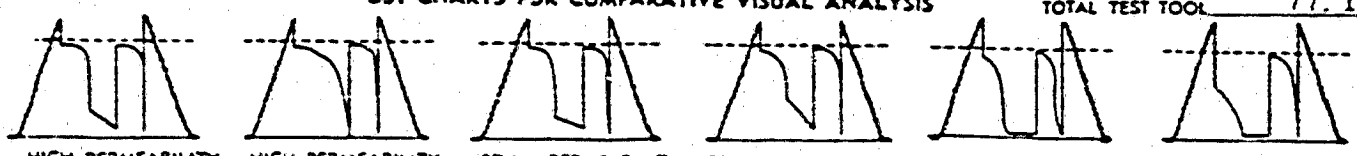
January 6, 1971 #4

DECALTA LRI KEELE R. #1-01

TESTING REPORT

45 LANDING SUB			
45 CHAMBER			
P.O SUB		1.00	
CO SUB		1.00	
SHUT IN TOOL		5.30	
R.F.S. No.	28	3.50	
R.F.S. No.			
HYDRAULIC TOOL		7.05	
JARS	SUTLIFF #19	5.50	
RECORDER No.	2227	5.00	DEPTH 4970
RECORDER No.			DEPTH
SAFETY JOINT		1.75	
BY PASS SUB			
1. PACKER DEPTH 4981 — PACKER		6.00	
2. PACKER DEPTH 4987 — PACKER		5.00	TOTAL TOOL ABOVE INTERVAL 41.10
ANCHOR—SPECIFY		1.00	
DRILL PIPE		31.00	
DRILL COLLAR		30.00	
BLANK OFF OR BY PASS SUB			
RECORDER No.			DEPTH
C. O.		1.00	
PERFS		30.00	
3. PACKER DEPTH — PACKER			TOTAL INTERVAL 613.00
4. PACKER DEPTH — PACKER			
ANCHOR—SPECIFY			
RECORDER No.	2011	1.00	DEPTH 5081
DRILL COLLARS		516.00	
TOTAL DEPTH 5600 — BULLNOSE		3.00	TOTAL TAIL PIPE 613.00
			TOTAL TEST TOOL 77.10

DST CHARTS FOR COMPARATIVE VISUAL ANALYSIS



HIGH PERMEABILITY STRONG DAMAGE EFFECT | HIGH PERMEABILITY NO DAMAGE EFFECT | MEDIUM PERMEABILITY STRONG DAMAGE EFFECT | MEDIUM PERMEABILITY NO DAMAGE EFFECT | LOW PERMEABILITY STRONG DAMAGE EFFECT | LOW PERMEABILITY NO DAMAGE EFFECT

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

LOCATION I-01 REC. NO. 2227 DEPTH 4970.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
RUNNING IN HOLE	1	0.0	0.0
	2	69.0	2630.9
INITIAL HYDROSTATIC PRESSURE	3	667.0	2630.9
FIRST FLOW PERIOD	4	667.0	42.4
FINAL FLOWING PRESSURE	5	672.0	34.5
BUILD-UP AFTER FIRST FLOW	6	672.0	34.5
	7	673.0	1140.3
	8	674.0	1344.1
	9	677.0	1522.8
	10	682.0	1731.0
	11	687.0	1832.9
INITIAL SHUT-IN PRESSURE	12	692.0	1877.6
FINAL FLOW PERIOD	13	692.0	1877.6
	14	695.0	842.8
INITIAL FLOWING PRESSURE	15	697.0	48.6
	16	702.0	49.5
	17	707.0	51.2
	18	722.0	58.3
	19	752.0	74.2
FINAL FLOWING PRESSURE	20	758.0	78.6
BUILD-UP AFTER FINAL FLOW	21	758.0	78.6
	22	763.0	770.3
	23	768.0	1032.2
	24	773.0	1185.9
	25	778.0	1293.1
	26	783.0	1373.5
	27	788.0	1440.6
	28	793.0	1495.1
	29	798.0	1541.6
	30	803.0	1582.7
	31	808.0	1615.7
	32	813.0	1646.1
FINAL SHUT-IN PRESSURE	33	818.0	1672.0
PULLING OUT OF HOLE	34	818.0	1672.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

LOCATION I-01 REC. NO. 2227 DEPTH 4970.

MEASURED PRESSURES

	POINT NUMBER	TIME MIN	PRESSURE PSIG
FINAL HYDROSTATIC PRESSURE	35	819.0	2620.9
	36	873.0	2620.9
OUT	37	978.0	0.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

LOCATION I-01 REC. NO. 2227 DEPTH 4970.

CALCULATIONS FOR LIQUID RECOVERY (FIRST SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE 2027.5

NO. OF POINTS CONSIDERED IN BUILD-UP 5
NO. OF POINTS USED IN EXTRAPOLATION 4
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)..... 21.94
EFFECTIVE PRODUCING TIME (MIN) 5.0

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

LOCATION 1-01 REC. NO. 2227 DEPTH 4970.

DATA FOR BUILD-UP PLOT (FIRST SHUT-IN)

POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
7	1.0	1140.3			6.00
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
8	2.0	1344.1			3.50
POINTS USED IN EXTRAPOLATION					
9	5.0	1522.8	1518.9	-3.9	2.00
10	10.0	1731.0	1730.0	-1.0	1.50
11	15.0	1832.9	1816.4	-16.5	1.33
12	20.0	1877.6	1863.8	-13.8	1.25

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

LOCATION I-01 REC. NO. 2227 DEPTH 4970.

CALCULATIONS FOR LIQUID RECOVERY (SECOND SHUT-IN)

(A) EXTRAPOLATED RESERVOIR PRESSURE	2103.7
NO. OF POINTS CONSIDERED IN BUILD-UP	8
NO. OF POINTS USED IN EXTRAPOLATION	5
ROOT MEAN SQUARE DEVIATION OF BEST-FIT LINE (PSI)	0.54
EFFECTIVE PRODUCING TIME (MIN)	71.0
(B) IN SITU CAPACITY (KH - MD FT)	1.87
SLOPE OF BUILD-UP CURVE (PSI/CYCLE)	1273.18
PRODUCING RATE (BBL/DAY)	14.66
FLUID VISCOSITY (CP)	1.000
FORMATION VOLUME FACTOR (RES BBL/ST BBL)	1.000
(C) EFFECTIVE PERMEABILITY (MD)	0.06
FORMATION THICKNESS	30.00
(D) PRODUCTIVITY INDEX (BBL/DAY/PSI)	0.01
FLOWING PRESSURE (PSIG)	78.6
(E) APPROXIMATE DRAINAGE RADIUS (FT)	7.0
TOTAL FLOWING TIME (MIN)	71.0
(F) ESTIMATED DAMAGE RATIO	0.60
RESERVOIR POROSITY (PERCENT)	25.00
TOTAL COMPRESSIBILITY (VOL/VOL/PSI X 10-6)	6.40
WELL-BORE RADIUS (IN)	3.94
CALCULATED SKIN FACTOR	-0.94

WELL NAME DECALTA LRI ET AL KEELE RIVER DST. NO. 4

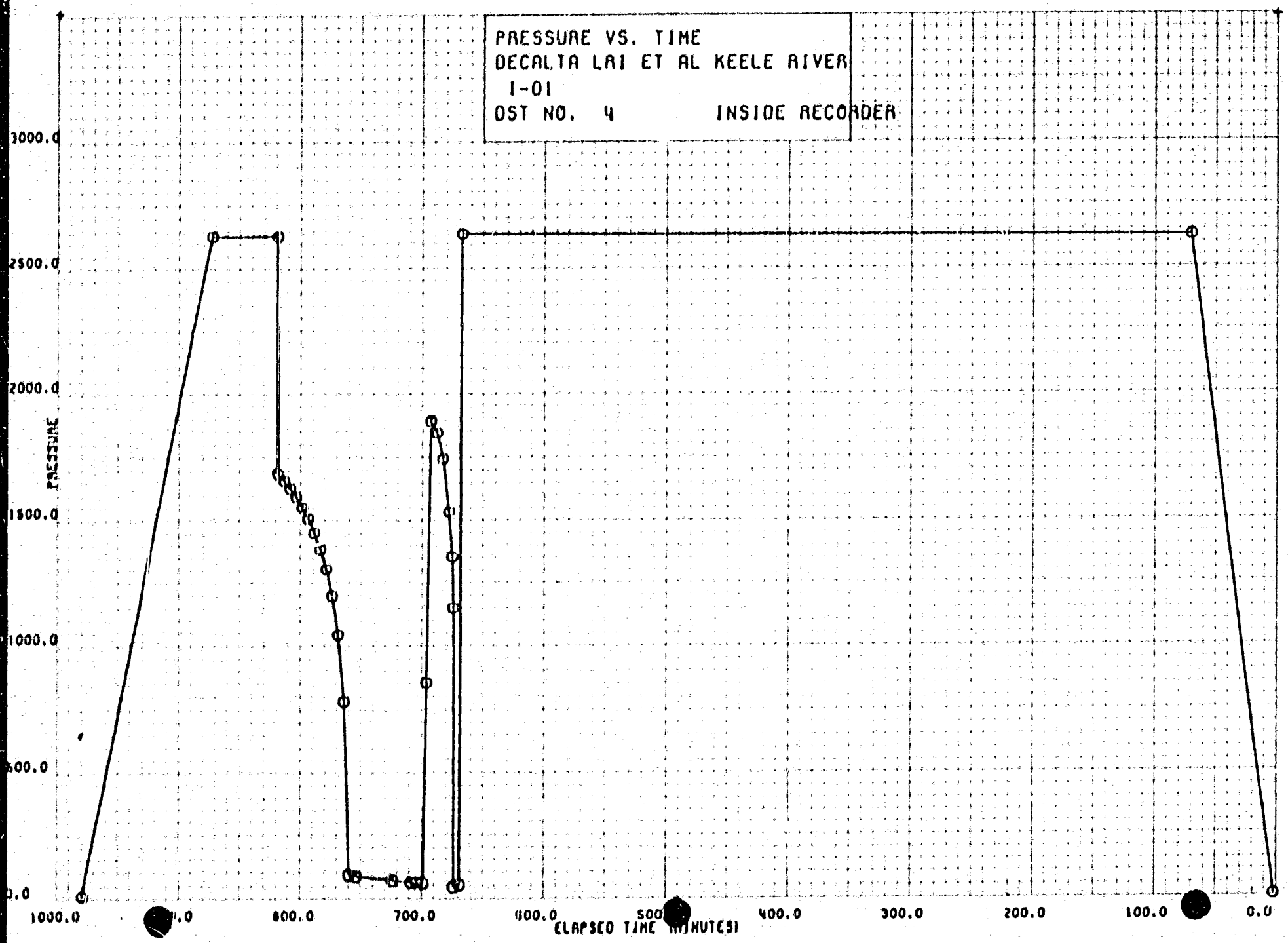
LOCATION I-01 REC. NO. 2227 DEPTH 4970.

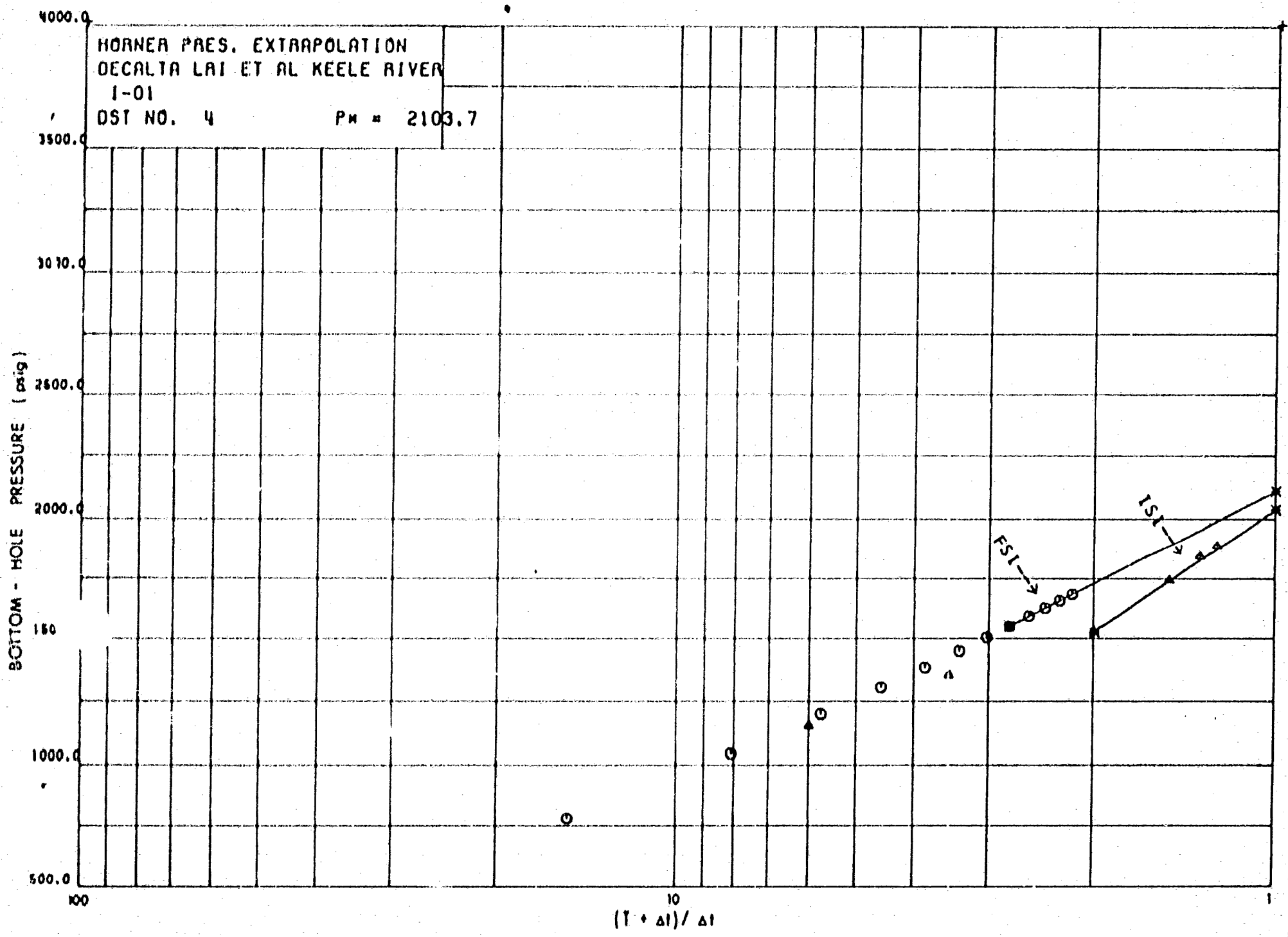
DATA FOR BUILD-UP PLOT (SECOND SHUT-IN)

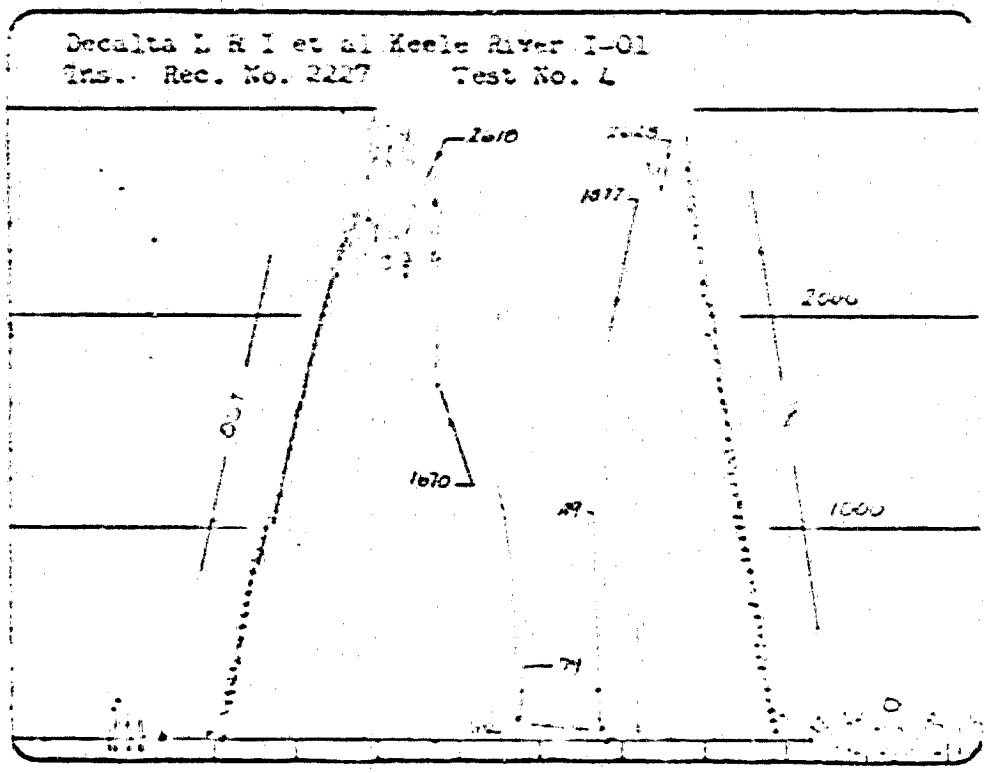
POINT NUMBER	TIME MIN	PRESSURE PSIG	PRESSURE CALC FROM BEST FIT LINE	PRESSURE DIFFERENCE CALC - OBSERVED	T+DELTA(T)/ DELTA(T)
EARLY POINTS NOT CONSIDERED					
22	5.0	770.3			15.20
23	10.0	1032.2			8.10
24	15.0	1185.9			5.73
25	20.0	1293.1			4.55
PORTION OF BUILD-UP CURVE NOT USED IN EXTRAPOLATION					
26	25.0	1373.5			3.84
27	30.0	1440.6			3.37
28	35.0	1495.1			3.03
POINTS USED IN EXTRAPOLATION					
29	40.0	1541.6	1539.4	-2.2	2.77
30	45.0	1582.7	1580.2	-2.5	2.58
31	50.0	1615.7	1615.1	-0.7	2.42
32	55.0	1646.1	1645.4	-0.7	2.29
33	60.0	1672.0	1672.0	-0.0	2.18

ASSUMPTIONS AND LIMITATIONS

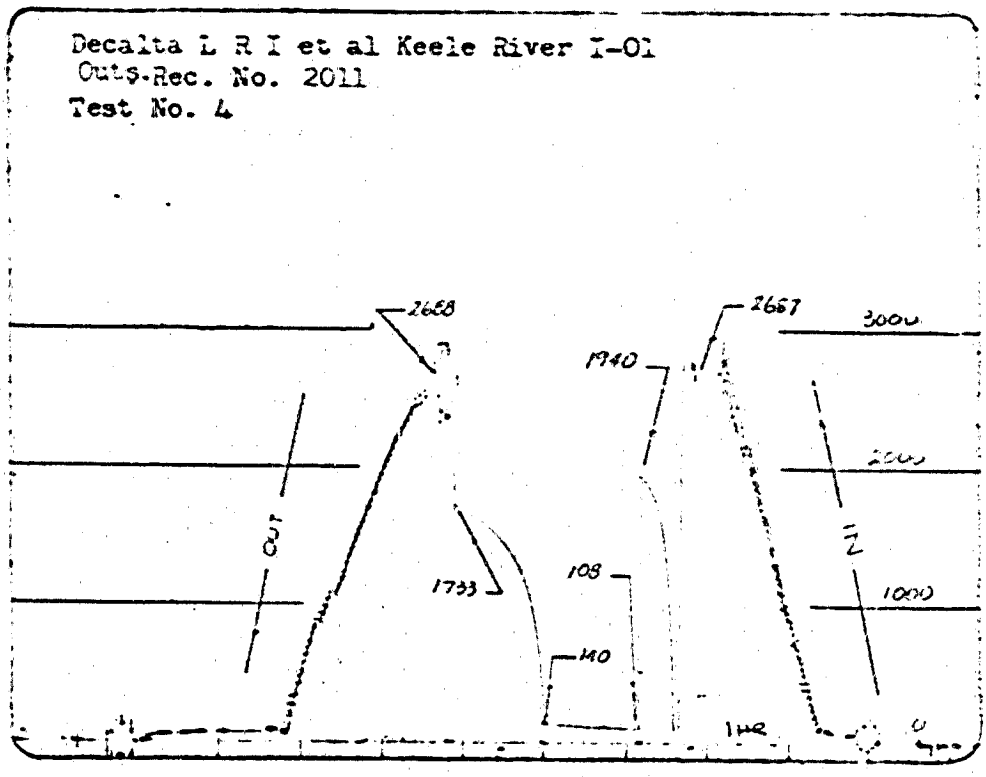
THE ENCLOSED DST INTERPRETATION CALCULATIONS REQUIRE SEVERAL NECESSARY ASSUMPTIONS TO PROVIDE A QUICK ESTIMATE OF MANY OF THE FACTORS INVOLVED. AS A RESULT THE INFORMATION GAINED SHOULD BE USED TO FORM AN OPINION OR ESTIMATE ONLY, UNTIL THE ASSUMPTIONS OF RESERVOIR AND FLUID PROPERTIES CAN BE WHOLLY OR PARTIALLY CLARIFIED BY MORE COMPLETE ANALYSIS AND TESTING.


PRESSURE VS. TIME
DECALTA LAI ET AL KEELE RIVER
I-01
DST NO. 4 INSIDE RECORDER
PRESSURE
3000.0
2500.0
2000.0
1500.0
1000.0
500.0
0.0
1000.0
800.0
700.0
400.0
300.0
200.0
100.0
0.0
ELAPSED TIME MINUTES


HORNER PRES. EXTRAPOLATION
DECALTA LAI ET AL KEELE RIVER
I-01
DST NO. 4
PM = 2103.7
4000.0
3500.0
3010.0
2500.0
2000.0
150
1000.0
500.0
BOTTOM - HOLE PRESSURE (psig)
100
10
1
(T + Δt) / Δt
FSI
TSI



DST RECORDER CHARTS



SECTION III

b) CASING REPORT

Well Decalta LRI et al Keele River I-01 Date December 6, 1970

Type of Casing String: (surface) (intermediate) (prod.) (liner)

Drilling Contractor Jennings, Rig #9

PIPE DATA

Make of Casing Stewarts & Lloyds

Type: (seamless) (welded) Size 8-5/8 No. of Joints 18

Weight 24#/ft. Grade K-55 Range II Threads 8R

Couplings: (short) (long) Minimum I.D. Maximum O.D.

Casing Shoe: make Rector type A depth 547 ft.

Cementing Collar: make Rector type A depth 512 ft.

Centralizers: No. 2 Make and Type Latch-on

Depths 542, 547

Scratchers: No. NIL Make and Type

Depths

Welding: (electric) (oxy-acetylene) No. of Collars? 2 Casing Shoe? Yes

Total amount casing run	565.63 ft.	Kelly Bushing elevation	951 ft.
Amount pipe above K.B.	17.73 ft.	K.B. to Rotary Table	- ft.
Depth Casing Shoe landed	547.90 ft.	R.T. to Derrick Floor	- ft.
Top of casing below K.B.	12.50 ft.	D.F. to Ground Level	- ft.
Amount of casing in hole	535.40 ft.	Ground Level elevation	933.7 ft.
Length of Landing Joint	26.93 ft.	G.L. to (casing bowl) to (casing collar)	4.80 ft.
Length of Cut off Joint	30.23 ft.	Csg. Bowl Flange Elev.	938.50 ft.
Length of Shoe Joint overall	35.27 ft.	K.B. to top of casing	12.50 ft.

CEMENTING DATA

Time Hole Open Before Casing Started in Hole 2 hrs.

Casing Started in Hole	6:00 p.M.	Casing in	11:00 p.M. (elapsed)	5 hrs.
Circulating: Started	11:00 p.M.	Finished	12:00 midnight M. (elapsed)	1 hrs.
Mixing Cement: Started	12:30 a.M.	Finished	2:15 a.M. (elapsed)	105 min.
Displacing: Started	2:15 a.M.	Plug Down	2:30 a.M. (elapsed)	15 min.

Maximum Displacement Pressure 300 psi. Final Pressure 600 psi.

Plug Displaced to 512.6 ft. Displacement Fluid: (oil) (water)

Method of Displacement Rig Pump

Method of Cementing B.J. mixing unit and rig pump displacing

Amount Cement Used 300 Sacks. Average Cement Slurry Weight 14 lbs./gal.

Kind of Cement: (Canadian) (Portland) (Gack): Weight per sack 80 lbs.

Estimated Amount Cement Returns 30 sacks. Time Cement to Set 1 hr and 16 mins thickening time @ 91°F. hrs.

Was Pipe Worked During Circulating? Yes Cementing? No How Long 1/2 hr.

Additives to Cement 3% $CaCl_2$

Cementing Company B.J. Operator Bud Varson

Casing Landed in hrs. Well Head Make Walker, Type "L", screw-on

Remarks Cement top 10' below rig matting. Topped off from surface with 60 sacks cement. Three-quarter inch copper refrigeration string clamped to surface casing from ground level to 70' below surface.

Signed D. A. Crawford

SECTION III

b) TUBULAR TALLY REPORT

Well: Decalta LRI et al Keele River I-01

Make Tubular Goods: Stewarts & Lloyds Type: Seamless

Size: 8-5/8 Weight: 24 Lbs./ft. Threads: 8R Grade: K-55 Range: II

Couplings: Type Minimum I.D. Maximum O.D.

Note: The following tally is listed in the same order as the tubular goods were run in the hole. That is joint number one will be the first joint in the hole and continuing in that order until the last joint run.

Jt. No.	feet	10s	Jt. No.	feet	10s	Jt. No.	feet	10s	Jt. No.	feet	10s	Jt. No.	feet	10s
* 1	35	27	1			1			1			1		
2	32	57	2			2			2			2		
3	33	34	3			3			3			3		
4	32	98	4			4			4			4		
5	31	12	5			5			5			5		
6	30	18	6			6			6			6		
7	31	74	7			7			7			7		
8	33	15	8			8			8			8		
9	27	72	9			9			9			9		
0	32	57	0			0			0			0		
a	320	64	d			g			j			m		
1	27	19	1			1			1			1		
2	31	51	2			2			2			2		
3	30	57	3			3			3			3		
4	31	86	4			4			4			4		
5	30	96	5			5			5			5		
6	33	41	6			6			6			6		
7	32	56	7			7			7			7		
8	26	93	8			8			8			8		
9			9			9			9			9		
0			0			0			0			0		
b	244	99	e			h			k			n		
1			1			1			1			1		
2			2			2			2			2		
3			3			3			3			3		
4			4			4			4			4		
5			5			5			5			5		
6			6			6			6			6		
7			7			7			7			7		
8			8			8			8			8		
9			9			9			9			9		
0			0			0			0			0		
c			f			i			l			o		

TOTALS

a	320	64
b	244	99
c		
d		
e		
f		
g		
h		
i		
j		
k		
l		
m		
n		
o		
	565	63

FINAL TOTAL

	565.63
Cut-off	-30.23
	535.40
K.B.	+12.50
	547.90

Remarks: * Includes Rector Guide shoe on bottom on Rector Float Collar on top.

Tallied by: D. A. Crawford

SECTION III

c) BIT RECORD

Well: Decalta LRI et al Keele River I-01

Drilling Contractor: Jennings International Drilling, Rig #9

Date Drilling Started: December 3, 1970 Date Completed: January 9, 1971

Bit No.	Size	Make and Kind	Serial	Depth From	Depth To	Total Feet	Total Hours	Remarks
1A	12-1/4	Hughes	917-R	0	136	136	10½	
2A	7-7/8	Hughes XIG	21290	136	491	355	11¾	
1A	12-1/4	Hughes	917-R	136	552	416	8¾	Reaming
1	7-7/8	Hughes XIG	24679	547	2053	1506	31½	
2	7-7/8	Hughes XIG	23677	2053	2626	573	27½	8-3-1
3	7-7/8	Hughes XV	20381	2626	2850	224	12½	
4	7-7/8	Hughes XV	18031	2850	3393	543	44½	6-2-1
5	7-7/8	Hughes XV	16219	3393	3680	287	22	4-1-1
6	7-7/8	Hughes XV	20037	3680	3730	50	9½	
7	7-7/8	Hughes XDV	21032	3730	3842	112	17	
8	7-7/8	Hughes J-44	AS427	3842	4636	794	135	
9	7-7/8	Hughes X55R	24416	4636	5466	830	117½	
10	7-7/8	Hughes WD7	20076	5466	5600	134	23¾	5-2-1

d) DAILY MUD RECORD

DECALTA LRI ET AL KEELE RIVER I-01

Date 1970	Depth	Weight #/ Gal.	Viscosity Seconds	Water Loss 15 min. CC	Filter Cake 32nds	Ph	Remarks and Additives
Dec 3	0		32				Caustic 200#
	40		32				Gel 1400#
							Gel 2000#
Dec 4	136		32				Gel 1000#
	167		29				
	316		38				Gel 3000#
							Caustic 100#
Dec 5	462		35				Gel 1600#
	Reaming		43				Gel 2500#
	Reaming		35				Gel 2000#
Dec 6	Reaming		85				Gel 2000#
	552		120				Gel 1000#
Dec 8	767		Water				Bicarb 300#
	1330	8.6	28				
Dec 9	1631	8.8	28				
	1896	9.1	28				Gel 1000#
							DV-68 1 gal
	2053	9.0	32				Gel 2600#
Dec 10	2053	9.0	34				
	2243	9.2	33				Gel 1400#
							DV-68 1 gal
	2390	9.1	38	12			Gel 1200#
							CMC 100#
Dec 11	2490	9.1	40		2	8.5	Gel 2000#
							CMC 200#
	2605	9.2	37	6.6	2	9.0	Gel 1200#
							CMC 100#
							Caustic 50#
							DV-68 1 gal
	2660	9.2	38				Gel 800#
Dec 12	2790	9.2	43	8.5	2	8.5	Gel 1000#
							DV-68 1 gal
							CMC 100#
	2850	9.2	40	6.2	2	9.0	
Dec 15	2860	9.2	35	7.2	2	9.0	
	2978	9.2	35	10	2	8.5	Gel 2500#
							CMC 50#
							DV-68 1 gal
							Caustic 50#

..../2

DECALTA LRI ET AL KEELE RIVER I-01

DAILY MUD RECORD (continued)

Date 1970	Depth	Weight #/ Gal.	Viscosity Seconds	Water Loss 15 min. C.C.	Filter Cake 32nds	Ph.	Remarks and Additives
Dec 16	3061	9.2	39	16	2	10	
	3145	9.2	38	9	2	9	Gel 2500#
							DV-68 1 gal
	3218	9.2	43	8.5	2	8	DV-68 1 gal
							Caustic 50#
							Gel 1000#
Dec 17	3325	9.2	45	10	2	9	DV-68 1 gal
							Gel 1000#
							CMC 100#
	3393	9.1	40	9	2	8.5	Gel 1000#
							DV-68 1 gal
							Caustic 50#
							CMC 50#
	3456	9.2	43	8.9	2	8	Caustic 50#
Dec 18	3558	9.2	40	9	2	8.5	Gel 1000#
							CMC 100#
	3640	9.2	40	7.6	2	8.5	Gel 3000#
							DV-68 1 gal
							Caustic 50#
	3680	9.3	50	7.8	4	8.5	Gel 1200#
							Caustic 50#
							DV-68 1 gal
Dec 19	3687	9.3	51				Caustic 100#
Dec 20	3726	9.2	45	8.6	2	10.5	
	3730	9.3	87	8.0	2	9.5	Gel 2500#
							DV-68 2 gals
Dec 21	3842	9.3	65	7.2	2	9.5	Gel 2400#
							DV-68 1 gal
Dec 22	3915	9.3	44	8.2	2	9	Caustic 50#
							Peltex 100#
							Gel 1000#
							DV-68 1 gal
Dec 23	3983	9.3	45	8.0	2	10.5	Peltex 50#
							Caustic 50#
Dec 24	4073	9.3	45	7.4	2	11.0	Gel 1200#
							Caustic 50#
							Peltex 100#
							DV-68 1 gal
Dec 25	4172	9.3	40	7.8	2	11.0	Gel 800#
							Caustic 50#
							Peltex 100#
							DV-68 1 gal

...../3

DAILY MUD RECORD

DECALTA LRI ET AL KEELE RIVER I-01 (continued)

Date 1970	Depth	Weight #/ Gal.	Viscosity Seconds	Water Loss 15 min. C.C.	Filter Cake 32nds	Ph.	Remarks and Additives
Dec 26	4220	9.4	43	7.2	2	10.5	Gel 3000# Caustic 50# DV-68 1 gal
Dec 27	4288	9.4	60	7.2	2	11.0	Caustic 50# Peltex 50#
	4344	9.4	46	7.4	2	10.5	Caustic 50# Peltex 100#
Dec 28	4464	9.4	43	7.2	2	10.5	Caustic 50#
	4532	9.4	40	7.2	2	10.5	Gel 1200# DV-68 1 gal
	4575	9.4	50	8.6	2	10.5	Gel 1400#
Dec 29	4620	9.4	54	7.4	2	10.5	Gel 1000# DV-68 1 gal Caustic 50# Peltex 100#
Dec 30	4760	9.6	62	7.2	2	10.5	Gel 900# Caustic 50# Peltex 100# DV-68 1 gal
	4798	9.6	50	7.4	2	10.5	Gel 1800# DV-68 2 gals Caustic 100#
Dec 31	4953	9.6	50	7.6	2	10.5	Gel 1800# DV-68 2 gals Caustic 100#
1971							
Jan 1	5074	9.6	55	7.2	2	10.5	Gel 600#
Jan 2	5248	9.6	55	7.4	2	10.5	Gel 1000# DV-68 1 gal
Jan 3	5393	9.7	60	7.6	2	10.5	Gel 1000# DV-68 1 gal
Jan 4	5600	9.9	58	7.4	2	9.5	Gel 1500# Caustic 50#
Jan 5	5600	9.8	110	7.6	2	10.5	Gel 2700#

...../4

DAILY MUD RECORD

DECALTA LRI ET AL KEELE RIVER I-01 (continued)

Date	Depth	Weight	Viscosity	Water Loss	Filter Cake	Ph.	Remarks and Additives
		#/ Gal.	Seconds	15 min. C.C.	32nds		
							TOTAL ADDITIVES
							Gel 66,700#
							Caustic 1,500#
							Peltex 650#
							DV-68 27 gals
							Bicarb 300#
							CMC 800#

SECTION III

e) DEVIATION SUMMARY

DATE	DEPTH		DEGREES
December 4, 1970	76		1
	106		1 1/4
	167		3/4
December 5, 1970	285		1
	404		3/4
	229	(reaming)	7/8
	349	(")	7/8
December 6, 1970	493		7/8
December 8, 1970	828		7/8
	1109		1
December 9, 1970	1456		1 1/2
	1550		1 1/4
	1864		1
December 10, 1970	2211		1 3/4
	2305		1 1/2
December 11, 1970	2400		1 1/4
	2500		1 1/8
	2626		3/4
December 12, 1970	2800		1
December 16, 1970	3030		1
December 17, 1970	3218		1 1/2
	3393		2
December 18, 1970	3470		2 1/4
	3525		2
	3570		2 1/4
December 19, 1970	3680		2 1/2
December 20, 1970	3720		2
December 21, 1970	3842		2 1/2
December 23, 1970	3900		2 3/4
	3965		2 3/4

..../2

e) DEVIATION SUMMARY - (continued)

DATE	DEPTH	DEGREES
December 24, 1970	4060	3 1/8
December 25, 1970	4150	3 1/8
December 27, 1970	4248	3 1/2
	4340	3 1/2
December 28, 1970	4459	3 3/4
December 29, 1970	4563	3 3/4
December 30, 1970	4720	3 3/4
December 31, 1970	4825	3 1/4
	4950	3
January 1, 1971	5138	3
January 2, 1971	5319	3 1/2
January 3, 1971	5449	3 1/4
January 5, 1971	5600	3 1/2

SECTION III

f) ABANDONMENT PLUGS

Plug No. 1:	Date Run:	January 7, 1971
	Interval:	5000' - 5200' K.B.
	Cement Used:	80 sacks Construction Cement; plug down @ 6:30 a.m.
	Cementing Company:	B. J. Services
	Operator:	W. L. Budvarson
Plug No. 2:	Date Run:	January 7, 1971
	Interval:	4100' - 4200' K.B.
	Cement Used:	75 sacks Construction Cement; plug down @ 9:00 a.m. Felt @ 4025' @ 4:45 p.m.
	Cementing Company:	B. J. Services
	Operator:	W. L. Budvarson
Plug No. 3:	Date Run:	January 7, 1971
	Interval:	3600' - 3800' K.B.
	Cement Used:	145 sacks Construction Cement; plug down @ 7:00 p.m. Felt @ 3610' @ 3:00 a.m., January 8
	Cementing Company:	B. J. Services
	Operator:	W. L. Budvarson
Plug No. 4:	Date Run:	January 8, 1971
	Interval:	500' - 600'
	Cement Used:	70 sacks Construction Cement; plug down @ 7:00 a.m. Felt @ 470' @ 3:00 p.m.
	Cementing Company:	B. J. Services
	Operator:	W. L. Budvarson
Plug No. 5:		Surface. Cut off surface casing and ran 7 sacks surface plug. Welded steel cap on surface casing. Welded riser on surface casing and marked with well name and location.

SECTION IV

SECTION IV

LOGS

DUAL INDUCTION-LATEROLOG

Company:	Schlumberger
Date:	January 5, 1971
Interval:	5593' - 549' K.B.
Operator:	Stuehmer

SIDEWALL NEUTRON POROSITY LOG

Company:	Schlumberger
Date:	January 5, 1971
Interval:	5594' - 3500' K.B.
Operator:	Stuehmer

BOREHOLE COMPENSATED SONIC LOG

Company:	Schlumberger
Date:	January 5, 1971
Interval:	5593' - 549' K.B.
Operator:	Stuehmer

FORMATION DENSITY LOG

Company:	Schlumberger
Date:	January 5, 1971
Interval:	5595' - 3500' K.B.
Operator:	Stuehmer

SECTION V

SECTION V

b) ANALYSIS

TYPE OF ANALYSIS:	Water Analysis
FILE No.:	CAL-2-3409
SAMPLED FROM:	DST #1 (Tool No. BJ-113)
INTERVAL:	3614' - 3680' K.B.
ANALYZING COMPANY:	Core Laboratories-Canada Ltd.

TYPE OF ANALYSIS:	Water Analysis
FILE No.:	CAL-2-3414
SAMPLED FROM:	DST #2 (Top of Tool)
INTERVAL:	3684' - 3843'
ANALYZING COMPANY:	Core Laboratories-Canada Ltd.

TYPE OF ANALYSIS:	Water Analysis
FILE No.:	CAL-2-3414
SAMPLED FROM:	DST #3 (Tool #RFS-23)
INTERVAL:	4165' - 4220'
ANALYZING COMPANY:	Core Laboratories-Canada Ltd.

TYPE OF ANALYSIS:	Mud Filtrate
FILE No.:	933-171
SAMPLED FROM:	DST #4
INTERVAL:	4987' - 5600' K.B.
ANALYZING COMPANY:	Core Laboratories-Canada Ltd.

TYPE OF ANALYSIS:	Mud Filtrate
FILE No.:	933-1107
SAMPLED FROM:	DST #4 (Tool RFS #28)
INTERVAL:	4987' - 5600' K.B.
ANALYZING COMPANY:	Core Laboratories-Canada Ltd.

SECTION V

CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS

(b) Water Analysis

File CAL-2-3409 Page 1 of 1

Company: Western Decalta Petroleum Limited

Well: Decalta LR1 et al Keele River 1-01 K.B. _____ Grd. 933'

Location: 64 20'40.05 NL 125 00'07.34 WL Field: Keele River Province: N.W.T.

Formation: Cretaceous Interval: 3614' - 3680'

Sampled from: DST #1 (From Tool No. BJ-113) by: B J Testers

Date sampled: Dec. 19/70 Date analysed: Dec. 29/70 Analyst: EM

Recovery: Tool Recovery: 1000 cc Muddy Water

Mud type _____ Water cushion _____

Resistivity: 0.385 Ohm-meters @ 71 °F

Specific gravity: 1.0119 @ 60°F

pH: 8.10 H_2S: Absent

Refractive Index: 1.335 @ 71°F

Total Solids:

Calculated: 16,394 mg/liter

By evaporation @ 110°: - mg/liter

By evaporation @ 180°C: - mg/liter

At ignition: - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO_3	SO_4	CO_3	OH
5713	417	107	Trace	Abs.	-	-	9228	346	583	Nil	Nil

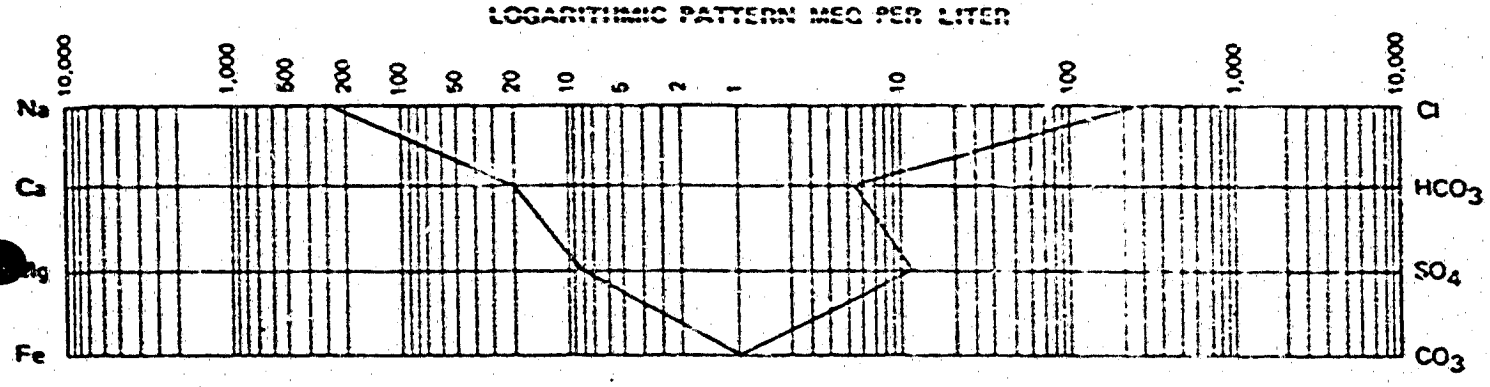
PER CENT CALCULATED SOLIDS

34.8	2.5	.7	Trace	Abs.	-	-	56.3	2.1	3.6	.0	.0

MEQ PER LITER

248.4	20.8	8.8	Trace	Abs.	-	-	260.2	5.7	12.1	.0	.0

LOGARITHMIC PATTERN MEQ PER LITER



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CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS

(b) Water Analysis

File CAL-2-1414 Page 1 of 2

Company: Western Decalta Petroleum Limited

Well: Decalta LRI Keele River I-01 K.B. _____ Grd. 933'

Location: 64 20'40.05 N.L. 125 00'07.34 W.L. Field: Wildcat Keele River Area Province: N.W.T.

Formation: Cretaceous Interval: 3684'-3843'

Sampled from: DST #2 (Top of Tool) by _____

Date sampled: Dec. 21/70 Date analysed: Dec. 31/70 Analyst: EM

Recovery: Drilling Mud

Mud type _____ Water cushion _____

Resistivity: 0.689 Ohm-meters @ 71 °F

Specific gravity: 1.0044 @ 60°F

pH: 8.20 H_2S: Absent

Refractive Index: 1.334 @ 71°F

Total Solids:

Calculated: 8,779 mg/liter

By evaporation @ 110°C: - mg/liter

By evaporation @ 180°C: - mg/liter

At ignition: - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO_3	SO_4	CO_3	OH
3179	120	44	Pres.	Abs.	-	-	4819	210	407	Nil	Nil

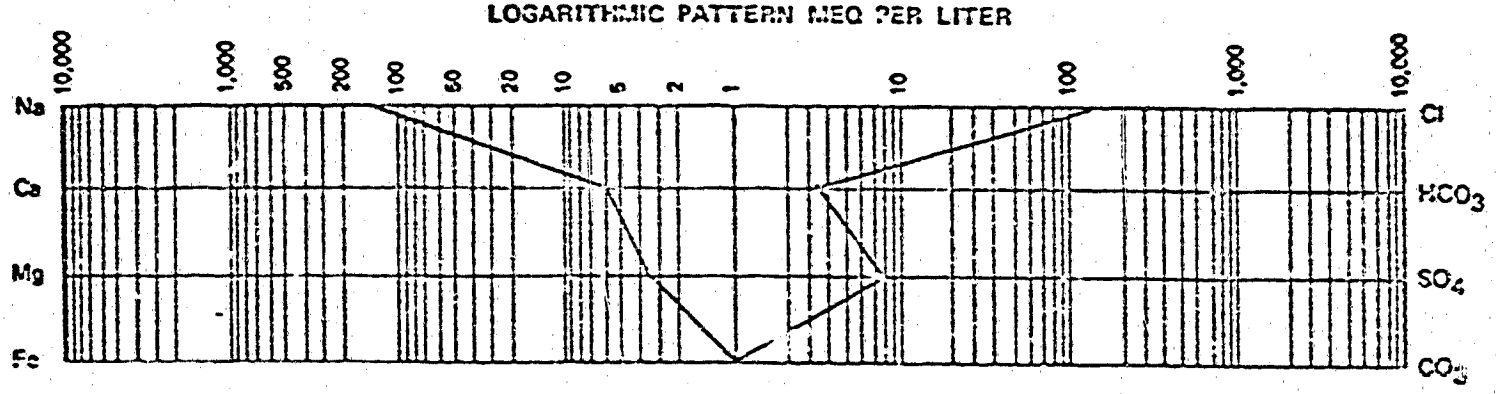
PER CENT CALCULATED SOLIDS

36.2	1.4	.5	Pres.	Abs.	-	-	54.9	2.4	4.6	.0	.0

MEQ PER LITER

138.2	6.0	3.6	Pres.	Abs.	-	-	135.9	3.4	8.5	.0	.0

LOGARITHMIC PATTERN MEQ PER LITER



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SECTION V

CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS

(b) Water Analysis

File CAL-2-3414 Page 2 of 2

Company: Western Decalta Petroleum Limited

Well: Decalta IRI Keele River I-01 K.B. _____ Grd. 933'

Location: 64 20'40.05 N.L. 125 00'07.34 W.L. Field: Wildcat Keele River Area Province: N.W.T.

Formation: Cretaceous Interval: 4165'-4220'

Sampled from: DST #3 (Tool #RFS-23) by _____

Date sampled: Dec. 26/70 Date analysed: Dec. 31/70 Analyst: EM

Recovery: Gas-Cut, Mud-Cut Salt Water. Tool Recovery: 4,000 cc Mud

Mud type _____ Water cushion _____

Resistivity: 0.227 Ohm-meters @ 71 °F

Specific gravity: 1.0205 @ 60°F

pH: 7.90 H_2S: Absent

Refractive Index: 1.338 @ 71°F

Total Solids:

Calculated: 28,940 mg/liter

By evaporation @ 110°C: - mg/liter

By evaporation @ 180°C: - mg/liter

At ignition: - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO_3	SO_4	CO_3	OH
10129	633	233	Pres.	Abs.	-	-	16131	307	1507	Nil	Nil

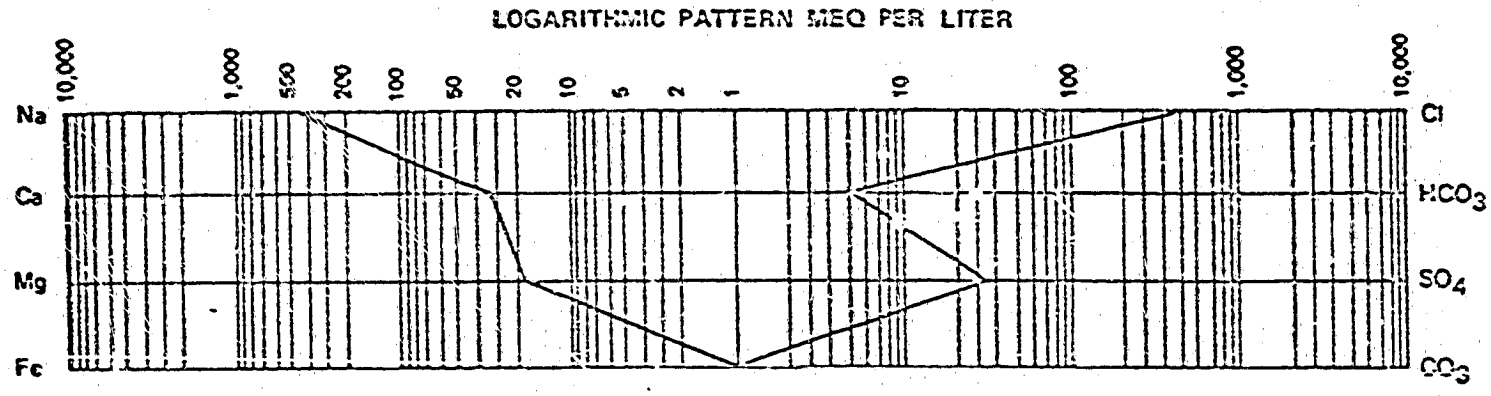
PER CENT CALCULATED SOLIDS

35.0	2.2	.8	Pres.	Abs.	-	-	55.7	1.1	5.2	.0	.0

MEQ PER LITER

440.4	31.6	19.2	Pres.	Abs.	-	-	454.9	5.0	31.3	.0	.0

LOGARITHMIC PATTERN MEQ PER LITER



CORE LABORATORIES - CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

b) Mud Filtrate Analysis

Company: Western Decalta Petroleum Limited — Page: 1 of 1

Well: Decalta LRI Keele River I-01 — File: 933-171

Field: Wildcat, Keele River Area, N. W. T. — Analyst: AH

Location: 64 20'40.05 N.L. 125 00'07.34 W.L. — Elevation: K.B. ____ Grd. ____

Formation: Cretaceous — Depth: 4987' - 5600'

Sampled from: DST #4 — by: ____

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

Date sampled: Jan. 6/71 — Date received: Jan. 18/71 — Date analyzed: Jan. 20/71

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

Recovery or flowrate: Drilling Mud

MUD FILTRATE ANALYSIS

Resistivity = 2.62 Ohm-meters @ 70°F

Chloride = 411 mg/liter

CORE LABORATORIES – CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

b) Mud Filtrate Analysis

Company: Western Decalta Petroleum Limited — Page: 1 of 1

Well: Decalta LRI et al Keele River I-01 — File: 933-1107

Field: Wildcat, Northwest Territories — Analyst: LK

Location: 64° 30' 40.05" N, 125° 0' 07.34" W — Elevation: K.B. ____ Grd. ____

Formation: Ronning — Depth: 4987' - 5600'

Sampled from: DST #4 (Tool RFS #28) — by ____

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

Date sampled: Jan. 6/71 — Date received: Jan. 27/71 — Date analysed: Jan. 28/71

Container pressure ____ — Mud ____ — Water cushion ____

Recovery or flowrate: Tool Recovery: 4000 cc Mud; DST Recovery: 90' Mud

Analysis of Mud Filtrate

Chloride - 34 mg/liter

Resistivity - 2.66 Ohm-meters @ 70°F

DAILY DRILLING REPORT

REPORT NO. 37 DATE Jan 9/71

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	DELCALTA LRE ETAL Keeler	1-01	Keele River		NWT

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	DRILL PIPE STRING SIZE	TOOL JOINT O.D. / TYPE THD.
JENNINGS DRILLING COMPANY, LTD.	Nine			

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Gerry Lechtzier

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	D-500	16
2.	Emsco	D-500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24.55	18		1370	847	

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
DRILLER Jed Bergum			

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	2 00	2	Lay down Kelly + mousehole + drain the same
2 00	6 00	4	Lay down BOP's
6 00	8 00	2	Cut off Casing + run 7 sk Cement plug + weld on
			Cap.

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
DRILLER Brian Sadoway			

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	4:00	8	TEAR OUT.
			Rig Released @
			300 PM Jan 9 - 1971

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
DRILLER Jed Bergum			

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	12 00	8	Tearing out Rig
			Boiler Started Dec. 2/70 and shut down
			on Jan 10/71

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 36 DATE JAN 4 1971

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	Decalta Bre et al Keg River	1-01	Keg River		NWT

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	SIZE	TOOL JOINT O.D. TYPE THD.
JENNINGS DRILLING COMPANY, LTD.	NWF			

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindenbergen

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	DA500	16
2.	Emsco	DA500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8	~~2 STS~~	24 J55	14		1370	5417	

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Ted Bergum	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1200	200	2	W.O.C
200	300	1	Run in
300	315	½	Felt Plug @ 3610
315	515	2	Lay Down D. pipe
515	700	1¾	Run plug #4 600-500
			w/ 40 sks CEMENT
700	800	1	W.O.C

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Brian Ladouceur	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	2:45	6¾	W.O.C.
2:45	3:00	¼	RUN IN TO FEEL PLUG #4.
3:00	3:15	¼	FELT PLUG AT 470
3:15	4:00	¾	LAY DOWN DRILL PIPE.

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Ted Bergum	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	9:30	5½	Clean Mud Tanks + blow all lines
9:30	12:00	2½	Drain pumps

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 35 — DATE JAN 7 1971

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARLETHA KEELER.	1-01	KEELE RIVER		N.W.T

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	SIZE	TOOL JOINT O.D.	TYPE THD.
JENNINGS DRILLING COMPANY, LTD.	9	2	4½	6¼	X.H.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwikson

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	BA 500	16
2.	EMSCO	BA 500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24.35S	18		13.70	547	500 SKS CONST. PLUS 3% CA

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES 8	SIZE 1/8
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD 35	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
STANDS D.P.	FT.	BIT NO.		TIME	
SINGLES D.P.	FT.	SIZE		WEIGHT	
D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
		TYPE		W.L.-C.C.	
D.C. I.D. O.D.	FT.	NOZZLE NO.		FL.TR. CK.	
		NOZZLE SIZE		PH	
STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
RMR. BODY O.D.	FT.	DEPTH IN			
SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
BIT OR C.B.	FT.	TOTAL HR. RUN			
	FT.	COND. OF BIT			
KELLY DOWN	FT.	REAMER NO.			
TOTAL	FT.	REAMER TYPE		DRILLER Ed Bergen	
WT. OF STRING	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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
5200	T.D.											

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00			RUN IN OPEN END.
	2:45	2¾	PICK UP FOUR SINGLES.
2:45	5:00	2¼	CIRC HOLE, PLUG DOWN @ 1:30 AM
5:00	6:30	1½	PLUG #1 5000' TO 5200' 80 SKS CEMENT
6:30	7:00	½	PULL 9 STDS & LAY 4 SINGLES DOWN
7:00	8:00	1	RUN PLUG #2 4100 4200 75 SKS CEMENT

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
STANDS D.P.	FT.	BIT NO.		TIME	
SINGLES D.P.	FT.	SIZE		WEIGHT	
D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
		TYPE		W.L.-C.C.	
D.C. I.D. O.D.	FT.	NOZZLE NO.		FL.TR. CK.	
		NOZZLE SIZE		PH	
STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
RMR. BODY O.D.	FT.	DEPTH IN			
SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
BIT OR C.B.	FT.	TOTAL HR. RUN			
	FT.	COND. OF BIT			
KELLY DOWN	FT.	REAMER NO.			
TOTAL	FT.	REAMER TYPE		DRILLER Brian Ladouceur	
WT. OF STRING	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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	9:00	1	RUN PLUG #2 4100-4200 75 SKS CEMENT
9:00	10:00	1	HOIST PIPE.
10:00	3:30	5½	WAIT ON CEMENT.
3:30	4:00	½	RUN IN TO FEEL PLUG #2

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
STANDS D.P.	FT.	BIT NO.		TIME	
SINGLES D.P.	FT.	SIZE		WEIGHT	
D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
		TYPE		W.L.-C.C.	
D.C. I.D. O.D.	FT.	NOZZLE NO.		FL.TR. CK	
		NOZZLE SIZE		PH	
STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
RMR. BODY O.D.	FT.	DEPTH IN			
SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
BIT OR C.B.	FT.	TOTAL HR. RUN			
	FT.	COND. OF BIT			
KELLY DOWN	FT.	REAMER NO.			
TOTAL	FT.	REAMER TYPE		DRILLER Ed Bergen	
WT. OF STRING	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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:30	½	FINISH RUNNING IN.
4:30	4:45	¼	FELT PLUG AT 4025
4:45	5:00	¼	HOIST 4 STS TO RUN PLUG #3
5:00	7:00	2	RUN PLUG #3 AT 3600 TO 3800 15 SKS.
7:00	8:00	1	HOIST PIPE
8:00	12:00	4	LAY DOWN 45 Singles

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 34 — DATE JAN 6 1971

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ETAL KEELE RIVER	101	KEELE RIVER		N.W.T

CONTRACTOR: JENNINGS DRILLING COMPANY, LTD. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.H.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Gene Lindsay

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	DA500	16
2.	EMSCO	DA500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 555			13.70	541	300 SKS CONST.
								PLUS 3% CAL

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING	LEIN		
CONDITIONING MUD & CIRCULATING	2½		
TRIPS	4½	3	1½
LUBRICATE RIG		¼	¼
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING DST.			4¼
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT ORDERS	1		
DRILL STEM TEST		2½	2
OTHER		2¼	
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1/8; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 34; CUMULATIVE ROTATING HRS. 420

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
53	STANDS D.P.	4997.42	FT.
	SINGLES D.P.	31.25	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C.O. O.D.	1.71	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	35.00	FT.
	TOTAL	5600.00	FT.
WT. OF STRING		130.000	LBS.

BIT RECORD: BIT NO. RR.R.; SIZE 7⅞; MFG. H.W.; TYPE WDT; NOZZLE NO. 2-1, SIZE 12 11; SER. NO. 20076; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FL.TR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED (TYPE, AMT., TYPE, AMT.); DRILLER Ted Burgess

FOOTAGE: FROM 5600 TO T.D.

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
						5½		5½		

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	1:00	1	W.O ORDERS
1:00	3:00	2	RUN IN HOLE
3:00	3:30	½	BREAK CIRC & CLEAN 15' FILL
3:30	5:30	2	CIRC HOLE PRIOR TO DST. # 4
5:30	8:00	2½	PULL OUT TO TEST.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FL.TR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED (TYPE, AMT., TYPE, AMT.); DRILLER Brian Ladoway

FOOTAGE: FROM 5600 TO T.D.

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK BOPS
8:15	10:30	2¼	MAKE UP DST #4
10:30	12:30	2	RUN IN WITH DST #4.
12:30	1:00	½	INITIAL SHUT IN
1:00	2:00	1	FLOW PERIOD.
2:00	3:00	1	FINIAL SHUT IN.
3:00	4:00	1	HOIST DST #4.
		8.	

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FL.TR. CK; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED (TYPE, AMT., TYPE, AMT.); DRILLER Ted Burgess

FOOTAGE: FROM 5600 TO T.D.

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE + CHECK BOPS.
4:15	5:45	1½	HOIST DST #4
5:45	[illegible]	[illegible]	BREAK DOWN DST #4 + SERVICE TOOLS.
[illegible]	10:00	4¼	LAY DOWN SAME
10:00	12:00	2	RUN IN D.C.'S LAY DOWN SAME

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 33 — DATE JAN 5 1976

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ET AL KEELE RIVER	F-01	KEELE RIVER		N.W.T

CONTRACTOR: JENNINGS DRILLING COMPANY, LTD. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.H.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsay

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1	EMSCO	DASCO	16"
2	EMSCO	DASCO	16
3			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		36 J55		547	13.70	547	300 SKS CONST. PLUS 3% CAL.

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING	5¼		
TRIPS	3¼		
LUBRICATE RIG	¼		
DEVIATION SURVEY	¼		
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING UP	1¼	8	6¼
RUNNING CASING & CEMENTING			
WAITING ON ORDERS			1¼
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1/8; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 33; CUMULATIVE ROTATING HRS. 420

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
53	STANDS D.P.	4997.42	FT.
1	SINGLES D.P.	31.25	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C/O O.D.	1.26	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	35.00	FT.
	TOTAL	5600	FT.

WT. OF STRING 130 m LBS.

BIT RECORD: BIT NO. 10; SIZE 7⅞; MFG. H.W.; TYPE WD1; NOZZLE NO. 2 1; NOZZLE SIZE 12 12; SER. NO. 200K; DEPTH OUT 5600; DEPTH IN 5466; TOTAL FTG. 134; TOTAL HR. RUN 23¾; COND. OF BIT 5-2-1; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 2:00 / 4:00; WEIGHT 9.8 / 9.8; VISC.-SEC 75 / 110; W.L.-C.C. 7.6 / 7.6; FLTR. CK. 2/32 / 2/32; PH 10.5 / 10.5; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: Gel 2700

DRILLER: Ted Bergum

FOOTAGE: FROM 5600 TO TD — DR.-D RM.-R CORE.-C — CORE NO.

FORMATION (SHOW CORE RECOVERY): FUEL 3.2

ROTARY RPM — WT. ON BIT 1000# — PUMP PRESS 1200 — PUMP NO. 1: LINER SIZE 5½ S.P.M. 49 — PUMP NO.: LINER SIZE — S.P.M. — METHOD RUN: SGL.-S PAR'EL-P COM'D-C

CHECK MOTOR KILLS. (WORKED OKAY)

DEVIATION RECORD: DEPTH 5600 DEV. 3½°

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER.
12:15	1:00	¾	CIRC SAMPLE
1:00	2:00	1	10 STD. DUMMY TRIP
2:00	4:00	2	CIRC HOLE CLEAN to Log
4:00	4:15	¼	DROP SURVEY @ 5600
4:15	6:45	2½	HOIST TO LOG.
6:45	7:00	¼	RIG UP SCHLUMBERGER.
7:00	8:00	1	LOGGING W/ SCHLUMBERGER.

Tally 560000
Strap 559996
000034

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR: STANDS D.P. FT.; SINGLES D.P. FT.; D.C. I.D. O.D. FT.; D.C. I.D. O.D. FT.; STB. BODY O.D. FT.; STB. BODY O.D. FT.; RMR. BODY O.D. FT.; SUBS O.D. FT.; BIT OR C.B. FT.; FT.; KELLY DOWN FT.; TOTAL FT.; WT. OF STRING LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK. LOGGING; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED

DRILLER: Brian Ladouceur

FOOTAGE: FROM 5600 TO TD

DEVIATION RECORD

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	4:00	8	LOGGING WITH SCHLUMBERGER
			LOGS RUN.
			1. DUEL INDUCTION
			2 SONIC GAMA WITH CALAPER.
			3 S. M. U
			CHECK DRUKS INSTALL NEW 2ND CHAIN.
			CHANGE FILTERS INSTALL NEW VALVE IN #2

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR: STANDS D.P. FT.; SINGLES D.P. FT.; D.C. I.D. O.D. FT.; D.C. I.D. O.D. FT.; STB. BODY O.D. FT.; STB. BODY O.D. FT.; RMR. BODY O.D. FT.; SUBS O.D. FT.; BIT OR C.B. FT.; FT.; KELLY DOWN FT.; TOTAL FT.; WT. OF STRING LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED

DRILLER: Ted Bergum

FOOTAGE: FROM 5600 TO T.D.

DEVIATION RECORD

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	10:15	6¼	LOGGING WITH SCHLUMBERGER
10:15	10:30	¼	RIG OUT SCHLUMBERGER.
10:30	12:00	1½	WAIT ON ORDERS

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 32 — DATE JAN. 4/91

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARI ETAL KEEL RIVER	1-01	KEEL RIVER		N.W.T.

CONTRACTOR: **JENNINGS DRILLING COMPANY, LTD.** — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. XH

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Dudchen

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	DA 500	16"
2.	Emsco	DA 500	16"
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J-55	18		13.10	547	300 sks CEMENT 3% CaCl

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
52	STANDS D.P.	4902.42 FT.
	SINGLES D.P.	63.23 FT.
18	D.C. I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C/O O.D.	1.76 FT.
	BIT OR G.B.	.65 FT.
		FT.
	KELLY DOWN	26.83 FT.
	TOTAL	5520 FT.
WT. OF STRING	126,000 LBS.	

BIT RECORD	
BIT NO.	10
SIZE	7 7/8
MFG.	H.W.
TYPE	WDT
NOZZLE NO.	2 1
NOZZLE SIZE	12 11
SER. NO.	20076
DEPTH OUT	
DEPTH IN	5466
TOTAL FTG.	54
TOTAL HR. RUN	8 1/4
COND. OF BIT	0/8
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	12:00	3:00	6:00
WEIGHT	9.7	9.7	9.8
VISC.-SEC	56	57	55
W.L.-C.C.	7.0	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Dave Fraser

FOOTAGE 50'

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
5470	5520	D		FUEL 5'	60	30	1200	5 1/2	48			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	1/4	RIG SERVICE + CHECK B.O.Ps
12:15	8:00	7 3/4	DRILL 7 7/8" HOLE

STr

WORK CLUTCHES EVERY 2 HRS.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
53	STANDS D.P.	4997.42 FT.
	SINGLES D.P.	FT.
18	D.C. 6 1/4" I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C.O. O.D.	1.76 FT.
	BIT OR G.B.	.65 FT.
		FT.
	KELLY DOWN	25.26 FT.
	TOTAL	5560.00 FT.
WT. OF STRING	128,000 LBS.	

BIT RECORD	
BIT NO.	10
SIZE	7 7/8
MFG.	H.W.
TYPE	WDT
NOZZLE NO.	2 1
NOZZLE SIZE	12 11
SER. NO.	20076
DEPTH OUT	
DEPTH IN	5466
TOTAL FTG.	90
TOTAL HR. RUN	16
COND. OF BIT	O.B.
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	8:00	12:00	3:00
WEIGHT	9.8	9.8	9.8
VISC.-SEC	55	55	55
W.L.-C.C.	7.6	7.6	7.6
FLTR. CK.	2/32	2/32	2/32
PH	10.0	10.0	10.0
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Ted Bergum

FOOTAGE 40'

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-P COM'D-C
5520	5560	D			60	30m	1200	5 1/2	48	5 1/2		S

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 A.M.	8 P.M.	1/4	RIG SER.
8 P.M.	4 A.M.	7 3/4	DRILL 7 7/8" HOLE

WORK CLUTCHES EVERY TWO HRS.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
53	STANDS D.P.	4997.42 FT.
1	SINGLES D.P.	31.25 FT.
18	D.C. I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUB X O O.D.	1.76 FT.
	BIT OR G.B.	.65 FT.
		FT.
	KELLY DOWN	35.00 FT.
	TOTAL	5600 FT.
WT. OF STRING	130,000 LBS.	

BIT RECORD	
BIT NO.	10
SIZE	7 7/8
MFG.	HW
TYPE	WDT
NOZZLE NO.	2 1
NOZZLE SIZE	12 11
SER. NO.	20076
DEPTH OUT	5600
DEPTH IN	5466
TOTAL FTG.	134
TOTAL HR. RUN	23 3/4
COND. OF BIT	??
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	6:00	8:00	10:00
WEIGHT	9.9	9.9	9.9
VISC.-SEC	53	58	70
W.L.-C.C.	7.4	7.4	7.2
FLTR. CK	2/32	2/32	2/32
PH	9.5	9.5	10.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.
GEL 1500#
Caustic 50#

DRILLER: Brian Galloway

FOOTAGE 40

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
5560	5600	DR			60	30	1200	5 1/2	49			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	1/4	RIG SERVICE + CHECK B.O.Ps
4:15	12:00	7 3/4	DRILL 7 7/8" HOLE

WORK CLUTCHS EVERY 2 HRS.

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7 3/4	7 3/4	7 3/4
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK / HRS. W/DP / HRS. WO/DP / HRS. STANDBY / TOTAL DAY WORK

WIRE LINE RECORD: REEL NO. / NO. OF LINES 8 SIZE 1 1/8 / FEET SLIPPED / FEET CUT OFF / PRESENT LENGTH / TON MI. OR TRIPS SINCE LAST CUT / CUMULATIVE TON MI. OR TRIPS / NO. OF DAYS FROM SPUD 32 / CUMULATIVE ROTATING HRS.

APPROVED — APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 31 DATE 7-3/1971

OPERATOR: Western Delta

LEASE: Delta LA State Keel River

WELL NO. 1-01 FIELD OR DIST. Keel River COUNTY STATE LA

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4½ TYPE THD. XH

TOOL JOINT 6¼ O.D.

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	Duplex	16"
2.	Emsco	Duplex	16"
3.			

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Grover Lockhart

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
8 5/8		24 J-55	18		13.20	540	Bro. in. Cement
							3% Cacl

THE DISTRIBUTION-HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¾	14¾	2¼
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			4¼
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY			¼
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			½
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK	
HRS. W/DP	
HRS. WO/DP	
HRS. STANDBY	
TOTAL DAY WORK	

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	8 SIZE 1⅛
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	31
CUMULATIVE ROTATING HRS.	390 hrs

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD		
51	STANDS D.P.	4893.75 FT.	BIT NO.	9	TIME	12:00	3:00
1	SINGLES D.P.	31.65 FT.	SIZE	7⅞	WEIGHT	9.7	9.7
18	D.C. I.D. O.D.	534.91 FT.	MFG.	HW	VISC.-SEC	58	60
	D.C. I.D. O.D.	FT.	TYPE	XSSR	W.L.-C.C.	7.6	7.6
	STB. BODY O.D.	FT.	NOZZLE NO.	2 1	FLTR. CK.	2/32	2/32
	STB. BODY O.D.	FT.	NOZZLE SIZE	11 12	PH	10.5	10.5
	RMR. BODY O.D.	FT.	SER. NO.	24416	SD. CONT. %		
1	SUBS. 6¼ O.D.	1.26 FT.	DEPTH OUT		PRESSURE GRADIENT		
	BIT OR C.B.	.65 FT.	DEPTH IN	4636			
		FT.	TOTAL FTG.	757	MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
	KELLY DOWN	16.28 FT.	TOTAL HR. RUN	10¾	GEL	1000#	
	TOTAL	5393 FT.	COND. OF BIT	0/8	DRIGE	1 Gal	
WT. OF STRING	123,000 LBS.		REAMER NO.				
			REAMER TYPE		DRILLER	Alan Fa[illegible]	

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD		
52	STANDS D.P.	4902.60 FT.	BIT NO.	9	TIME	9:00	12:00
	SINGLES D.P.	FT.	SIZE	7⅞	WEIGHT	9.6	9.6
18	D.C. 6¼ I.D. O.D.	534.91 FT.	MFG.	HW	VISC.-SEC	55	55
	D.C. I.D. O.D.	FT.	TYPE	XSSR	W.L.-C.C.	8.2	8.2
	STB. BODY O.D.	FT.	NOZZLE NO.	2 1	FLTR. CK.	2/32	2/32
	STB. BODY O.D.	FT.	NOZZLE SIZE	11 12	PH	10.0	10.0
	RMR. BODY O.D.	FT.	SER. NO.	24416	SD. CONT. %		
1	SUBS. 6¼ O.D.	1.26 FT.	DEPTH OUT		PRESSURE GRADIENT		
	BIT OR C.B.	.65 FT.	DEPTH IN	4636			
		FT.	TOTAL FTG.	814	MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
	KELLY DOWN	10.06 FT.	TOTAL HR. RUN	11½			
	TOTAL	5420.02 FT.	COND. OF BIT	0/8			
WT. OF STRING	124 000 LBS.		REAMER NO.				
			REAMER TYPE		DRILLER	Ed Rey[illegible]	

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD			MUD RECORD	
53	STANDS D.P.	4902.60 FT.	BIT NO.	9	10	TIME	6:00
	SINGLES D.P.	FT.	SIZE	7⅞	7⅞	WEIGHT	9.6
18	D.C. 6¼ I.D. O.D.	534.91 FT.	MFG.	HW	HW	VISC.-SEC	55
	D.C. I.D. O.D.	FT.	TYPE	XSSR	WD7	W.L.-C.C.	8.2
	STB. BODY O.D.	FT.	NOZZLE NO.	2 1	2 1	FLTR. CK	2/32
	STB. BODY O.D.	FT.	NOZZLE SIZE	11 12	12 11	PH	10.0
	RMR. BODY O.D.	FT.	SER. NO.	24416	20076	SD. CONT. %	
1	SUBS. 6¼ O.D.	1.26 FT.	DEPTH OUT	5466		PRESSURE GRADIENT	
	BIT OR C.B.	.65 FT.	DEPTH IN	4636	5466		
		FT.	TOTAL FTG.	830	4	MUD & CHEMICALS ADDED TYPE	AMT. TYPE
	KELLY DOWN	30.06 FT.	TOTAL HR. RUN	11¾	½		
	TOTAL	5450 FT.	COND. OF BIT		0/8		
WT. OF STRING	124 m. LBS.		REAMER NO.				
			REAMER TYPE			DRILLER	Alan Fa[illegible]

DAY TOUR

FROM	TO	FOOTAGE 54'	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 SOLIDS PARTICLE COMPOSE
5339	5393		D		Fine 6¼ 6"	60	30	1200	5½	46			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	Rig Service & Check BOP
12:15	8:00	7¾	Drill 7⅞" Hole
			Work in Clothes
			Every 2 Hrs.

DAY TOUR

FROM	TO	FOOTAGE 57'	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 SOLIDS PARTICLE COMPOSE
5393	5450		D			60	30	1200	5½	46	5½		5

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	Rig Ser. & Check B.O.P.
8:15	4:00	7¾	Drill 7⅞" Hole
			Work Air Clothes
			Every 2 Hrs.

EVENING TOUR

FROM	TO	FOOTAGE 10'	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 SOLIDS PARTICLE COMPOSE
5450	5466					60	30	1200	5½	46			5
5466	5470												

DEVIATION RECORD: DEPTH 5449' | DEV. 3½° | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	Rig Ser. Check motor shut offs (OKAY).
4:15	1:30	2¾	Drill 7⅞ Hole
1:30	1:45	¼	Drop Survey
1:45	11:00	4¼	Trip for Bit
11:00	11:30	½	Break Crn. & Clean To Bottom 3' Fill
11:30	12:00	½	Drill 7⅞" Hole

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 30 — DATE Jan 21

OPERATOR	LEASE
Western Delta	Delta LR1 Etal Red River

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	SIZE	TOOL JOINT	PUMP NO.	MANUFACTURER
Jennings International Drilling, A Division of Western Electronics & Engineering Ltd.	9	3	4½	TYPE THD. XH (6¼ O.D.)	1.	Emsco
					2.	Emsco
					3.	

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwickson

WELL NO.	FIELD OR DIST.	COUNTY	STATE
1-01	Red River		Utah

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J-55	18		12 ft	549	130 sk. Cement
								3% CaCl

TYPE	STROKE LENGTH
Dr 500	16"
Dr 500	16"

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	9½	7¾	7½
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	½	¼	½
DEVIATION SURVEY			½
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	8
SIZE	1⅛
LINE SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	30
CUMULATIVE ROTATING HRS.	371½

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD		
49	STANDS D.P.	4620.22 FT.	BIT NO.	9	TIME	12:00	4:00
2	SINGLES D.P.	62.93 FT.	SIZE	7⅞	WEIGHT	9.6	9.6
15	D.C. 6¼ I.D. O.D.	534.91 FT.	MFG.	HW	VISC.-SEC	54	56
	D.C. I.D. O.D.	FT.	TYPE	XSSR	W.L.-C.C.	7.4	7.4
			NOZZLE NO.	2 1	FLTR. CK.	2/32	2/32
			NOZZLE SIZE	11 12	PH	10.5	10.5
	STB. BODY O.D.	FT.	SER. NO.	24416	SD. CONT. %		
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT		
	RMR. BODY O.D.	FT.	DEPTH IN	4636			
1	SUBS 6¼ O.D.	1.76 FT.	TOTAL FTG.	612	MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
	BIT OR C.B.	.65 FT.	TOTAL HR. RUN	53½	GEL	1000#	
		FT.	COND. OF BIT	0/8	DIESEL	1200 gal	
	KELLY DOWN	38.12 FT.	REAMER NO.				
	TOTAL	5248 FT.	REAMER TYPE		DRILLER	Harold Fox	
WT. OF STRING	121,000 LBS.						

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD		
50	STANDS D.P.	4713.56 FT.	BIT NO.	9	TIME	8:00	12:00
1	SINGLES D.P.	31.31 FT.	SIZE	7⅞	WEIGHT	9.7	9.7
18	D.C. 6¼ I.D. O.D.	534.91 FT.	MFG.	HW	VISC.-SEC	55	55
	D.C. I.D. O.D.	FT.	TYPE	XSSR	W.L.-C.C.	7.6	7.8
			NOZZLE NO.	2 1	FLTR. CK.	2/32	2/32
			NOZZLE SIZE	11 12	PH	10.0	10.0
	STB. BODY O.D.	FT.	SER. NO.	24416	SD. CONT. %		
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT		
	RMR. BODY O.D.	FT.	DEPTH IN	4636			
1	SUBS O.D.	1.76 FT.	TOTAL FTG.	660	MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
	BIT OR C.B.	.65 FT.	TOTAL HR. RUN	91¼			
		FT.	COND. OF BIT	0/8			
	KELLY DOWN	13.75 FT.	REAMER NO.				
	TOTAL	5296.00 FT.	REAMER TYPE		DRILLER	Red Berger	
WT. OF STRING	121,000 LBS.						

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD		
51	STANDS D.P.	4713.56 FT.	BIT NO.	9	TIME	4:00	8:00
2	SINGLES D.P.	62.93 FT.	SIZE	7⅞	WEIGHT	9.7	9.7
18	D.C. 6¼ I.D. O.D.	534.91 FT.	MFG.	HW	VISC.-SEC	55	53
	D.C. I.D. O.D.	FT.	TYPE	XSSR	W.L.-C.C.	7.6	7.6
			NOZZLE NO.	2 1	FLTR. CK	2/32	2/32
			NOZZLE SIZE	11 12	PH	10.0	10.5
	STB. BODY O.D.	FT.	SER. NO.	24416	SD. CONT. %		
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT		
	RMR. BODY O.D.	FT.	DEPTH IN	4636			
1	SUBS O.D.	1.76 FT.	TOTAL FTG.	763	MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
	BIT OR C.B.	.65 FT.	TOTAL HR. RUN	99½			
		FT.	COND. OF BIT	0/8			
	KELLY DOWN	25.25 FT.	REAMER NO.				
	TOTAL	5339 FT.	REAMER TYPE		DRILLER	[illegible]	
WT. OF STRING	121,000 LBS.						

FOOTAGE 56

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. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL'S PAR'EL'P COM'D'C
5192	5248	D		Fuel 7¾ 7"	60	32	1200	5½	46			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	Rig Service & Check BOPs
12:15	5:00	7¾	Drill 7⅞" Hole

Work Clutches Every 2 Hrs

FOOTAGE 48

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. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL'S PAR'EL'P COM'D'C
5248	5296	D			60	32	1200	5½	46			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	Rig Service & Check BOPs
8:15	4:00	7¾	Drill 7⅞ Hole

Work Clutches Every 2 hours

FOOTAGE 43

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. LINER SIZE	PUMP NO. S.P.M.	METHOD RUN SGL'S PAR'EL'P COM'D'C
5296	5339	D			60	32	1200	5½	46			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	5358	3½°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SER.
4:15	8:00	3¾	DRILL 7⅞ HOLE
8:00	8:30	½	SURVEY @ 5358
8:30	12:00	3½	DRILL 7⅞" HOLE

WORK CLUTCHES EVERY TWO HRS

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 29 DATE January 1, 1971

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARI. ETAL KEEL RIVER	1-A	KEEL RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4 1/2 TYPE THD. XH — TOOL JOINT 6 1/4 O.D.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindahl

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	D4 500	16"
2.	Emsco	D4 500	16"
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J-55	18		13.70	547	300 cement 3% CaCl

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7 1/4	7 1/4	7 1/4
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS	1/2	1/2	
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY			1/2
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	8 SIZE 1 1/8
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	29
CUMULATIVE ROTATING HRS.	349 hrs.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
47	STANDS D.P.	4433.97 FT.
2	SINGLES D.P.	61.83 FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C/O O.D.	1.76 FT.
	BIT OR SUB.	.65 FT.
		FT.
	KELLY DOWN	41.00 FT.
	TOTAL	5074 FT.
	WT. OF STRING	120,000 LBS.

BIT RECORD		
BIT NO.	9	
SIZE	7 7/8	
MFG.	H.W.	
TYPE	X55R	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	438	
TOTAL HR. RUN	61 1/4	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	12:00	4.00
WEIGHT	9.6	9.6
VISC.-SEC	55	55
W.L.-C.C.	7.0	7.2
FLTR. CK.	2/32	2/32
PH	10.5	10.5
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	600#		

DRILLER: Dave Frykas

FOOTAGE 75'

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
4999	5074	D			60	32	1250	5 1/2	46			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	1/4	Rig Service & Check Bops
12:15	7:30	7 1/4	Drill 7 7/8" Hole
7:30	8:00	1/2	Trip to Retrieve Rubber

Work Clutches Every 2 Hrs.

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
48	STANDS D.P.	45 27.37 FT.
2	SINGLES D.P.	61.65 FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C/O O.D.	1.76 FT.
	BIT OR SUB.	.65 FT.
		FT.
	KELLY DOWN	10.66 FT.
	TOTAL	5138.00 FT.
	WT. OF STRING	120,000 LBS.

BIT RECORD		
BIT NO.	9	
SIZE	7 7/8	
MFG.	HW	
TYPE	X55R	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	502	
TOTAL HR. RUN	68 1/2	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	9:00	1:00	3:00
WEIGHT	9.5	9.5	9.5
VISC.-SEC	62	60	60
W.L.-C.C.	7.2	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %	—		
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER: Ed Bergum

FOOTAGE 64'

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. 1 LINER SIZE	PUMP NO. 1 S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
5074	5138	D			60	32M	1200	5 1/2	48	5 1/2	45	S

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:30	1/2	Finish trip to retrieve rubbers
8:30	8:45	1/4	Rig Service & Check Bops
8:45	4:00	7 1/4	Drill 7 7/8 Hole

Work Clutches Every 2 hrs.

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
49	STANDS D.P.	4620.22 FT.
	SINGLES D.P.	FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C/O O.D.	1.76 FT.
	BIT OR SUB.	.65 FT.
		FT.
	KELLY DOWN	34.46 FT.
	TOTAL	5192 FT.
	WT. OF STRING	120,000 LBS.

BIT RECORD		
BIT NO.	9	
SIZE	7 7/8	
MFG.	HW	
TYPE	X55R	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	556	
TOTAL HR. RUN	75 3/4	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	5:00	8:00	10:00
WEIGHT	9.5	9.5	9.6
VISC.-SEC	60	55	55
W.L.-C.C.	7.6	7.6	7.9
FLTR. CK	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER: Dave Frykas

FOOTAGE 54'

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
5138	5192	D			60	32	1200	5 1/2	46			S

DEVIATION RECORD: DEPTH 5138 | DEV. 3° | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	1/4	Rig Service
4:15	8:45	4 1/2	Drill 7 7/8 Hole
8:45	9:15	1/2	Survey @ 5138
9:15	12:00	2 3/4	Drill 7 7/8" Hole

Work Clutches Every 2 Hrs

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 28 — DATE Dec 31/70

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ETAL KEEL RIVER	1-01	KEEL RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. XH

PUMPS:

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	DA 500	16"
2.	EMSCO	DA 500	16"
3.			

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsay

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J-55	18		3.74	547	300 sks. Cement 3% CaCl

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¼	7¾	7¼
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	½		½
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1/8; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 28; CUMULATIVE ROTATING HRS. 327¼

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
46	STANDS D.P.	4340.84	FT.
	SINGLES D.P.		FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	19.84	FT.
	TOTAL	4898	FT.
	WT. OF STRING 118,000		LBS.

BIT RECORD

BIT NO.	9	
SIZE	7 7/8	
MFG.	H.W	
TYPE	XSSR	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	262	
TOTAL HR. RUN	39	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	12:00	4:00	6:00
WEIGHT	9.5	9.6	9.6
VISC.-SEC	52	50	50
W.L.-C.C.	7.2	7.0	7.0
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: David Frykas

FOOTAGE 54'

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 PART'L-P COM'D-C
4844	4898	D		FUEL 7 FEET	60	27	1150	5½	50			

DEVIATION RECORD: DEPTH 4825 — DEV. 3 1/4°

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SERVICE AND CHECK B.O.P'S
12:15	2:00	1¾	DRILL 7 7/8" HOLE
2:00	2:30	½	SURVEY @ 4825
2:30	8:00	5½	DRILL 7 7/8" HOLE

WORK CLUTCHES EVERY 2 HRS.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
46	STANDS D.P.	4340.94	FT.
2	SINGLES D.P.	63.06	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	11.74	FT.
	TOTAL	4953.00	FT.
	WT. OF STRING 120,000		LBS.

BIT RECORD

BIT NO.	9	
SIZE	7 7/8	
MFG.	H.W.	
TYPE	XSSR	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	317	
TOTAL HR. RUN	46 3/4	
COND. OF BIT	0/0	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	8:00	12:00	4:00
WEIGHT	9.6	9.6	9.6
VISC.-SEC	50	50	60
W.L.-C.C.	7.6	7.6	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	11.0
SD. CONT. %	.5	2	
PRESSURE GRADIENT			

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

Gel / 1800

DRILLER: Ted Bergum

FOOTAGE 55

FROM	TO	DR.-D RM.-R CORE.-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP #1 LINER SIZE	PUMP #1 S.P.M.	PUMP #2 LINER SIZE	PUMP #2 S.P.M.	METHOD RUN SGL.-S PART'L-P COM'D-C
4898	4953	D			60	25m	1150	5½	50	5½		S
					60	25m	1250	5½	45			

DEVIATION RECORD: DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 A.M.	8:15	¼	RIG SER
8:15	4:00	7¾	DRILL 7 7/8" HOLE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
47	STANDS D.P.	4433.47	FT.
	SINGLES D.P.		FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FY.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	27.71	FT.
	TOTAL	4999	FT.
	WT. OF STRING 120,000		LBS.

BIT RECORD

BIT NO.	9	
SIZE	7 7/8	
MFG.	HW	
TYPE	XSSR	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	363	
TOTAL HR. RUN	54	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	6:00	8:00	10:00
WEIGHT	9.6	9.5	9.6
VISC.-SEC	60	64	60
W.L.-C.C.	7.2	6.2	6.8
FLTR. CK	3/32	3/32	3/32
PH	11.0	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Dave Frykas

FOOTAGE 46'

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 COM'D-C
4953	4999	D			60	27m	1250	5½	46			S

DEVIATION RECORD: DEPTH 4950 — DEV. 3°

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	Rig Service
4:15	9:00	4¾	Drill 7 7/8 hole
9:00	9:30	½	SURVEY @ 4950 3°
9:30	12:00	2½	Drill 7 7/8" HOLE

CHANGE GLAND PACKING FLY WHEEL SIDE D.500 #1 PUMP.

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 27 — DATE Dec 30/70

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	Decalta LRI et al Keel River	1-01	Keel River		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. XH

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Gerry Lindsay

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	D-500	16"
2.	Emsco	D-500	16"
3.			

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
LAST CASING	8⅝		24 J-55	18		13.70	547	300 sks. Cement
TUBING OR LINER	8⅝							3% CaCl

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¾	7¾	
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY		¼	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG		¼	
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. W/O/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1/10; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT 63; CUMULATIVE TON MI. OR TRIPS 63; NO. OF DAYS FROM SPUD 27; CUMULATIVE ROTATING HRS. 305½

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
44	STANDS D.P.	4186.16	FT.
1	SINGLES D.P.		FT.
8	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 6¼ O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	39.00	FT.
	TOTAL	4760	FT.
WT. OF STRING	112,000		LBS.

BIT RECORD

BIT NO.	9		
SIZE	7⅞		
MFG.	HW		
TYPE	XSR		
NOZZLE NO.	2 1		
NOZZLE SIZE	11 12		
SER. NO.	24416		
DEPTH OUT			
DEPTH IN	4636		
TOTAL FTG.	124		
TOTAL HR. RUN	17		
COND. OF BIT	0/B		
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	12:00	3:00	6:00
WEIGHT	9.7	9.6	9.5+
VISC.-SEC	58	62	50
W.L.-C.C.	7.2	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	900#	DU/68	1 GAL
CAUSTIC	50#		
PELTEX	100#		

DRILLER: Blaine Frykas

FOOTAGE 67'

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'EL-P COM'D-C
4693	4760			Fuel 6ft	60	25	1150	5½	50			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	Rig Service and Check BOPs
12:15	8:00	7¾	Drill 7⅞" Hole

Work Clutches Every 2 Hrs.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
45	STANDS D.P.	4246.77	FT.
1	SINGLES D.P.		FT.
8	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 6¼ O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	13.41	FT.
	TOTAL	4798.00	FT.
WT. OF STRING	112,000		LBS.

BIT RECORD

BIT NO.	9		
SIZE	7⅞		
MFG.	HW		
TYPE	XSR		
NOZZLE NO.	2 1		
NOZZLE SIZE	11 12		
SER. NO.	24416		
DEPTH OUT			
DEPTH IN	4636		
TOTAL FTG.	162		
TOTAL HR. RUN	24		
COND. OF BIT	0/B		
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	8:00	12:00	4:00
WEIGHT	9.6	9.7	9.5
VISC.-SEC	50	50	55
W.L.-C.C.	7.4	7.4	
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	11.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1800#		
DU-68	2 gal		
Caustic	100#		

DRILLER: Ted Bergum

FOOTAGE 38'

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'EL-P COM'D-C
4760	4798	D			60	25m	1150	5½	50	5½		S

DEVIATION RECORD: DEPTH 4720' DEV. 3¾ / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 AM	8:15	¼	Rig Ser + Check B.O.P.
8:15	9:00	¾	Drill 7⅞" Hole
9:00	9:30	½	Survey @ 4720'
9:30	9:45	¼	Repair Rotary Chain
9:45	4:00	6¼	Drill 7⅞" Hole

Work Air Clutches Every 2 Hrs.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
45	STANDS D.P.	4246.77	FT.
1	SINGLES D.P.	31.22	FT.
8	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 6¼ O.D.	1.76	FT.
1	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	28.39	FT.
	TOTAL	4944	FT.
WT. OF STRING			LBS.

BIT RECORD

BIT NO.	9		
SIZE	7⅞		
MFG.	H.W.		
TYPE	XSR		
NOZZLE NO.	2 1		
NOZZLE SIZE	11 12		
SER. NO.	24416		
DEPTH OUT			
DEPTH IN	4636		
TOTAL FTG.	208		
TOTAL HR. RUN	31¾		
COND. OF BIT	0/B		
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	6:00	8:00	10:00
WEIGHT	9.5	9.5	9.5
VISC.-SEC	55	59	54
W.L.-C.C.		7.4	7.2
FLTR. CK	3/32	2/32	2/32
PH	11.0	11.0	11.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER: David Frykas

FOOTAGE 46'

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'EL-P COM'D-C
4798	4844	D			60	25	1150	5½	50	5½		S

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	Rig Ser.
4:15	12:00	7¾	Drill 7⅞ Hole

Work Clutches Every 2 Hrs.

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 26 — DATE Dec 29/70

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	Decalta Lr et al Keel River	1-01	Keel River		N.W.T

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

SIGNATURE OF OPERATOR'S REPRESENTATIVE: George Lindsay

SIGNATURE OF CONTRACTOR'S TOOL PUSHER:

DRILL PIPE STRING NO.	SIZE	TOOL JOINT	TYPE THD.
3	4½	6¼ O.D.	XH

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1	Emsco	D4500	16"
2	Emsco	D4500	16"
3			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J-55	18		13.70	547	300 sx Cement 3% CaCl

TIME DISTRIBUTION–HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¼	8¾	7¾
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS		3¼	
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	½		
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER		¼	
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. STABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD

REEL NO.; NO. OF LINES 8 SIZE 1¼; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON M. OR TRIPS SINCE LAST CUT 63; CUMULATIVE TON M. OR TRIPS 63; NO. OF DAYS FROM SPUD 26; CUMULATIVE ROTATING HRS. 283¾

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
43	STANDS D.P.	4058.12 FT.
	SINGLES D.P.	FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS C/O O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	24.51 FT.
	TOTAL	4620 FT.
WT. OF STRING	170,000 LBS.	

BIT RECORD		
BIT NO.	RR-8	
SIZE	7⅞	
MFG.	H.W.	
TYPE	J-44	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	KS 427	
DEPTH OUT		
DEPTH IN	3842	
TOTAL FTG.	778	
TOTAL HR. RUN	132½	
COND. OF BIT	O/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	12:30	3:00	6:00
WEIGHT	9.4	9.4	9.4
VISC.-SEC	47	55	54
W.L.-C.C.	7.4	7.4	7.6
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: GEL 1000#; DX/68 1 GAL; CAUSTIC 50#; PELTEX 100#

DRILLER

FOOTAGE 45'

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. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
4575	4620	D			60	20M	1150	5½	50			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	4563	3¾°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	Rig Service & Check BOPs
12:15	5:00	4¾	Drill 7⅞" Hole
5:00	5:30	½	Survey @ 4563
5:30	8:00	2½	Drill 7⅞" Hole

Work Clutches Every 2 Hrs.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
43	STANDS D.P.	4058.12 FT.
1	SINGLES D.P.	31.30 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	1826.00 FT.
	TOTAL	4645.00 FT.
WT. OF STRING	110 m.	LBS.

BIT RECORD		
BIT NO.	RR-8	9
SIZE	7⅞	7⅞
MFG.	H.W.	H.W.
TYPE	J44	KSR
NOZZLE NO.	2 1	2 1
NOZZLE SIZE	11 12	11 12
SER. NO.	KS 427	24416
DEPTH OUT	4636	
DEPTH IN	3842	4636
TOTAL FTG.	794	9
TOTAL HR. RUN	135	1¼
COND. OF BIT		O/B
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	8:00	4:00
WEIGHT	9.4	9.4
VISC.-SEC	55	55
W.L.-C.C.	7.8	7.0
FLTR. CK.	2/32	2/32
PH	10.5	10.5
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

DRILLER Ed Bergman

FOOTAGE 16'

FROM	TO	DR.-D RM.-R CORE-C	CORE NO.	FORMATION (SHOW CORE RECOVERY)	ROTARY RPM	WT. ON BIT 1000#	PUMP PRESS	PUMP NO. 2 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
4620	4636				60	20m	1150	5½	50	5½		S
4636	4645	D	9'		60	20m		5½	50			S

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 AM	8:15	¼	Rig Ser.
8:15	10:30	2¼	Drill 7⅞" Hole
10:30	2:00	3½	Trip for Bit
2:00	2:30	½	Ream Circ & Clean 15' Fill
2:30	4:00	1½	Drill 7⅞" Hole

Work Clutches Every Two Hrs.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
43	STANDS D.P.	4058.12 FT.
22	SINGLES D.P.	628.4 FT.
63	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.16 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	35.00 FT.
	TOTAL	4693 FT.
WT. OF STRING	110,000	LBS.

BIT RECORD		
BIT NO.	9	
SIZE	7⅞	
MFG.	H.W.	
TYPE	KSR	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	24416	
DEPTH OUT		
DEPTH IN	4636	
TOTAL FTG.	57	
TOTAL HR. RUN	9¼	
COND. OF BIT	O/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	8:00	10:00
WEIGHT	9.7	9.7
VISC.-SEC	52	52
W.L.-C.C.	7.2	7.2
FLTR. CK	2/32	2/32
PH	10.5	10.5
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

DRILLER Norm Ingram

FOOTAGE 48'

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'EL-P COM'D-C
4645	4693				60	20m	1100	5½	50	5½		S
4690						25m						

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	Rig Ser.
4:15	12:00	7¾	Drill 7⅞" Hole

Work Clutches Every 2 Hrs.

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 25 DATE DEC 28, 1970

OPERATOR: WESTERN DECALTA

LEASE: DECALTA ARI ET AL KEEL RIVER

WELL NO. 1-01 FIELD OR DIST. KEEL RIVER COUNTY STATE N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4½ TOOL JOINT 6¼ O.D. TYPE THD. XH

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwikow

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	Emsco	D7500	16
2.	Emsco	D7500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		32-55	18		13.70	547	300 CEMENT. 3% CACL

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¾	7¼	4¼
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			1
LUBRICATE RIG	¼	1/4	¼
DEVIATION SURVEY		½	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			¼
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK

HRS. W/DP

HRS. WO/DP

HRS. STANDBY

TOTAL DAY WORK

WIRE LINE RECORD

REL. NO.

NO. OF LINES 8 SIZE 1/4

FEET SLIPPED

FEET CUT OFF

PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT 0

CUMULATIVE TON MI. OR TRIPS 0

NO. OF DAYS FROM SPUD 25

CUMULATIVE ROTATING HRS. 265

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
41	STANDS D.P.	3869.02	FT.
1	SINGLES D.P.	31.29	FT.
	D.C. I.D. O.D.		FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 20 O.D.	1.76	FT.
	BIT OR CS.	.65	FT.
			FT.
	KELLY DOWN	26.00	FT.
	TOTAL	4464	FT.
	WT. OF STRING	108,000	LBS.

BIT RECORD

BIT NO.	RR 8	
SIZE	7⅞	
MFG.	HW	
TYPE	J-44	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	A5427	
DEPTH OUT	4464	
DEPTH IN	3842	
TOTAL FTG.	622	
TOTAL HR. RUN	111¾	
COND. OF BIT	OB	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	2:00	4:00	6:00
WEIGHT	9.4	9.4	9.4
VISC.-SEC	44	43	41
W.L.-C.C.	7.0	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Caustic	50#		

DRILLER: Brian Galloway

FOOTAGE 60

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
4404	4464	D		8 FEET FUEL	60	20	1000	5½	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SERVICE + CHECK B.O.PS.
12:15	8:00	7¾	DRILL 7⅞" HOLE.
		8	

WORK CLUTCHES EVERY 2 HRS

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
42	STANDS D.P.	3963.41	FT.
	SINGLES D.P.		FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 20 O.D.	1.76	FT.
	BIT OR CB.	.65	FT.
			FT.
	KELLY DOWN	32.25	FT.
	TOTAL	4532	FT.
	WT. OF STRING	108,000	LBS.

BIT RECORD

BIT NO.	RR 8	
SIZE	7⅞	
MFG.	HW	
TYPE	J-44	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	A5427	
DEPTH OUT	4532	
DEPTH IN	3842	
TOTAL FTG.	690	
TOTAL HR. RUN	119	
COND. OF BIT	OB	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	8:00	11:00	3:00
WEIGHT	9.4	9.4	9.4
VISC.-SEC	40	40	45
W.L.-C.C.	7.2	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	1200#		
DV-68	1 gal		

DRILLER: David Frykas

FOOTAGE 68'

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
4464	4532	D			60	20	1000	5½	50			
4510					60	18	1000					

DEVIATION RECORD: DEPTH 4459 | DEV. 3¾° | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK B.O.PS
8:15	12:45	4½	DRILL 7⅞" HOLE
12:45	1:15	½	SURVEY @ 4459'
1:15	4:00	2¾	DRILL 7⅞" HOLE

WORK CLUTCHES EVERY 2 HRS.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
42	STANDS D.P.	3963.41	FT.
2	SINGLES D.P.	63.01	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS 20 O.D.	1.76	FT.
	BIT OR CB.	.65	FT.
			FT.
	KELLY DOWN	46.20	FT.
	TOTAL	4575.00	FT.
	WT. OF STRING	108M	LBS.

BIT RECORD

BIT NO.	RR 8	
SIZE	7⅞	
MFG.	HW	
TYPE	J-44	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	A5427	
DEPTH OUT		
DEPTH IN	3842	
TOTAL FTG.	733	
TOTAL HR. RUN	126¼	
COND. OF BIT	OB	
REAMER NO.		
REAMER TYPE		

MUD RECORD

TIME	4:00	8:00	11:00
WEIGHT	9.4	9.4	9.4
VISC.-SEC	53	50	50
W.L.-C.C.	7.4	8.6	8.4
FLTR. CK	2/32	2/32	2/32
PH	10.5	10.5	10.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1400#		

DRILLER: Ted Bergum

FOOTAGE 43'

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-P COM'D-C
4532	4575	D			60	20	1500	5½	50	5½		S

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SER.
4:15	5:30	1¼	DRILL 7⅞" HOLE
5:30	6:30	1	TRIP TO REMOVE RUBBERS.
6:30	7:00	½	BREAK CIRC. & CLEAN 16' FILL.
7:00	12:00	5	DRILL 7⅞" HOLE.

WORK CLUTCHES EVERY 2 HRS.

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 20 — DATE DEC 23, 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN / DECALTA	DECALTA LRI ET AL KEEL RIVER	1-01	KEEL RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X-H

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Dave Griffiths

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	DA 500	16
2.	EMSCO	DA 500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 lb/ft K-55	18		13.70	547	300 SKS CEMENT 3% CA

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¼	7¾	7¼
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	½		½
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE ⅛; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT 440; CUMULATIVE TON MI. OR TRIPS 440; NO. OF DAYS FROM SPUD 20; CUMULATIVE ROTATING HRS. 164½

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
36	STANDS D.P.	3395.99	FT.
	SINGLES D.P.		FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	22.00	FT.
	TOTAL	3955	FT.
	WT. OF STRING	100 000	LBS.

BIT RECORD: BIT NO. 8; SIZE 7⅞; MFG. HW; TYPE J-44; NOZZLE NO. 2 1/; SIZE 11 12; SER. NO. AS427; DEPTH OUT 3955; DEPTH IN 3842; TOTAL FTG. 113; TOTAL HR. RUN 19; COND. OF BIT OB; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	12:00	3:00	6:00
WEIGHT	9.3	9.3	9.3
VISC.-SEC	46	44	42
W.L.-C.C.	8.0	8.0	8.2
FL.TR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Brian Ladoway

FOOTAGE 40

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.L.P COND.S
3915	3955	DR.		3 FEET FUEL	50	20M	1000	5½	50	5½		
					55	15M	1000	5½	50			

DEVIATION RECORD: DEPTH 3900 — DEV. 2¾

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SERVICE + CHECK B.O.Ps
12:15	4:00	3¾	DRILL 7⅞" HOLE
4:00	4:30	½	SURVEY at 3900 2¾°
4:30	8:00	3½	DRILL 7⅞" HOLE.
		8	WORK CLUTCHES EVERY 2 HRS.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
36	STANDS D.P.	3395.99	FT.
1	SINGLES D.P.	31.62	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	19.00	FT.
	TOTAL	3983	FT.
	WT. OF STRING	105 000	LBS.

BIT RECORD: BIT NO. 8; SIZE 7⅞; MFG. H.W.; TYPE J-44; NOZZLE NO. 2 1/; SIZE 11 12; SER. NO. AS427; DEPTH OUT; DEPTH IN 3842; TOTAL FTG. 141; TOTAL HR. RUN 26¾; COND. OF BIT OB; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	8:00	10.00	1:00
WEIGHT	9.3	9.3	9.3
VISC.-SEC	44	45	45
W.L.-C.C.	8.0	8.0	8.0
FL.TR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.; DELTEX 50#; CAUSTIC 50#

DRILLER: Dave Griffiths

FOOTAGE 28'

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.L.P COND.S
3955	3983	D		CHANGED VALVE AND SEAT IN MUD PUMP	50	15M		5½	50			

DEVIATION RECORD: DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE & B.O.Ps
8:15	4:00	7¾	DRILL 7⅞" HOLE
		31	WORK CLUTCHES EVERY 2 HRS.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
36	STANDS D.P.	3395.99	FT.
2	SINGLES D.P.	63.22	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD: BIT NO. 8; SIZE 7⅞; MFG. H.W.; TYPE J-44; NOZZLE NO.; SIZE 11 12; SER. NO. AS427; DEPTH OUT 4017; DEPTH IN 3842; TOTAL FTG. 175; TOTAL HR. RUN 34; COND. OF BIT OB; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	4:00	6:00	10:00
WEIGHT	9.3	9.3	9.3#
VISC.-SEC	45	44	43
W.L.-C.C.	8.0		7.8
FL.TR. CK.	2/32	2/32	2/32
PH	10.5	11.0	11.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Brian Ladoway

FOOTAGE 34

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.L.P COND.S
3983	4017				50	15M	000	5½	50	5½		

DEVIATION RECORD: DEPTH 3965 — DEV. 2¾

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE & B.O.P.
4:15	8:30	4¼	DRILL 7⅞ HOLE
8:30	9:00	½	SURVEY at 3965 2¾°
9:00	12:00	3	DRILL 7⅞" HOLE
		8	WORK CLUTCHES EVERY 2 HRS

APPROVED — APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 19 DATE DEC 22, 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARI ET AL KEEL RIVER	1-01	KEEL RIVER		N W T

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4½ TYPE THDX-H

TOOL JOINT 6¼ O.D.

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Fredrikson

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	DA-300	16
2.	EMSCO	DA-500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	9⅝	24	J55	18	13.70	547		300 SKS CEMENT
							3	90 CAL.

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL		4	7½
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS	3½		
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST	2½		
OTHER		¼	
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	8 SIZE ⅛
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	19
CUMULATIVE ROTATING HRS.	164½

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED (TYPE, AMT., TYPE, AMT.); DRILLER Brian Kadoway

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SERVICE + CHECK B.O.Ps
12:15	3:00	2¾	RUN IN SLOW WITH DST #2 - 3684-3843
3:00	3:30	½	INITIAL SHUT IN.
3:30	4:30	1	FLOW PERIOD
4:30	5:30	1	FINIAL SHUT IN.
5:30	8:00	2½	HOIST DST #2. (SLOWLY) 300 FEET FLUID
		8	

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
35	STANDS D.P.	3301.31	FT.
	SINGLES D.P.		FT.
1	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS 9⅝ O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	24.00	FT.
	TOTAL	3862.	FT.
	WT. OF STRING	98,000	LBS.

BIT RECORD: BIT NO. 8; SIZE 7⅞; MFG. H.W.; TYPE J-44; NOZZLE NO. 3 1/; NOZZLE SIZE 11; SER. NO. A5427; DEPTH OUT 3862; DEPTH IN 3842; TOTAL FTG. 20; TOTAL HR. RUN 4; COND. OF BIT 0/B; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	2:00	4:00
WEIGHT	9.2	9.2
VISC.-SEC	43	45
W.L.-C.C.	8.2	8.2
FLTR. CK.	2/32	2/32
PH	9.0	9.0

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

DRILLER Wayne Fryfogel

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
3842	3862	D			20	20	1000	5½	50			

DEVIATION RECORD: DEPTH, DEV., DIRECTION, DEPTH, DEV., DIRECTION, DEPTH, DEV., DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
7:00	7:15	¼	RIG SERVICE & CHECK B.O.P.S
7:15	9:30	2¼	LAY DOWN TOOL
9:30	11:30	2	RUN IN w/ BIT 8
11:30	12:00	½	BREAK CIRC + CLEAN TO BOTTOM 3' FILL
12:00	4:00	4	DRILL 7⅞ HOLE

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
35	STANDS D.P.	3301.31	FT.
2	SINGLES D.P.	62.89	FT.
1	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS 9⅝ O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	14.00	FT.
	TOTAL	3915	FT.
	WT. OF STRING	98,000	LBS.

BIT RECORD: BIT NO. 8; SIZE 7⅞; MFG. H.W.; TYPE J-44; NOZZLE NO. 3 1/; NOZZLE SIZE 11 10; SER. NO. A5427; DEPTH OUT 3915; DEPTH IN 3842; TOTAL FTG. 73; TOTAL HR. RUN 11½; COND. OF BIT 0B; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	7:00	9:00	11:00
WEIGHT	9.2	9.3	9.3
VISC.-SEC	45	44	40
W.L.-C.C.	8.2	8.2	8.0
FLTR. CK.	2/32	2/32	2/32
PH	9.0	9.0	10.0

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

TYPE	AMT.	TYPE	AMT.
CAUSTIC	50#	DUG	1 gal.
PELTEX	100#		
GEL	1000#		

DRILLER Brian Kadoway

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
3862	3915	D			50	20	1000	5½	50			

DEVIATION RECORD: DEPTH, DEV., DIRECTION, DEPTH, DEV., DIRECTION, DEPTH, DEV., DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE + CHECK BOPs.
4:15	12:00	7¾	DRILL 7⅞" HOLE

WORK CLUTCHES EVERY 2 HRS.

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 18 — DATE DEC 21 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRIETHL KEELE RIVER	1601	KEELE RIVER		N.W.T

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George [illegible]

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	D500	16
2.	EMSCO	D500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		24 J55	18		13.70	547	300 SKS CLASS "G" Plus 3% CAL.
		25 BBLS AHEAD						

MORNING TOUR

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¼	7¾	
REAMING			
CONDITIONING MUD & CIRCULATING			3
TRIPS			2¾
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG	½		½
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			1½
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

DRILLING ASSEMBLY AT END OF TOUR		
34	STANDS D.P.	3206.52 FT.
1	SINGLES D.P.	31.56 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	24.60 FT.
	TOTAL	3800.00 FT.
WT. OF STRING	96 M.	LBS.

BIT RECORD	
BIT NO.	7
SIZE	7⅞
MFG.	H.W
TYPE	X.D.V
NOZZLE NO.	2 1
NOZZLE SIZE	11 12
SER. NO.	21032
DEPTH OUT	
DEPTH IN	3730
TOTAL FTG.	70
TOTAL HR. RUN	9¼
COND. OF BIT	OB.
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	1:00	3:00	7:00
WEIGHT	9.3	9.3	9.3
VISC.-SEC	68	66	60
W.L.-C.C.	6 6	6.8	7.0
FLTR. CK.	2/32	2/32	2/32
PH	10.5	10.5	10.0
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Ed Bergum

FOOTAGE 55'		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'EL-P COM'D-C
3745	3800	D			74	25	1100	5½	50	5½		S
				5'4 FUEL								

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12⁰⁰	12¹⁵	¼	RIG SER.
12¹⁵	6¹⁵	6	DRILL 7⅞ HOLE
6¹⁵	6⁴⁵	½	WORK ON HWKS.
6⁴⁵	8⁰⁰	1¼	DRILL 7⅞ HOLE

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
34	STANDS D.P.	3206.52 FT.
2	SINGLES D.P.	63.17 FT.
	D.C. I.D. O.D.	FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	35.00 FT.
	TOTAL	3842 FT.
WT. OF STRING	98,000	LBS.

BIT RECORD	
BIT NO.	7
SIZE	7⅞
MFG.	HW
TYPE	XDV
NOZZLE NO.	2 1
NOZZLE SIZE	11 12
SER. NO.	21032
DEPTH OUT	3842
DEPTH IN	3730
TOTAL FTG.	112
TOTAL HR. RUN	17
COND. OF BIT	OB
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	9⁰⁰	12⁰⁰	3:00
WEIGHT	9.3	9.3	9.3
VISC.-SEC	48	43	44.2
W.L.-C.C.	7.0	7.2	7.2
FLTR. CK.	2/32	2/32	2/32
PH	9.5	9.5	9.5
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Brian Sadoway

FOOTAGE 42		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'EL-P COM'D-C
3800	3842	D			70	25	1000	5½	50			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK MOTOR KILLS + KELLY COCK
8:15	4:00	7¾	DRILL 7⅞" HOLE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
34	STANDS D.P.	3206.52 FT.
2	SINGLES D.P.	63.17 FT.
	D.C. I.D. O.D.	FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	35.00 FT.
	TOTAL	3842 FT.
WT. OF STRING	98,000	LBS.

BIT RECORD	
BIT NO.	7
SIZE	7⅞
MFG.	HW
TYPE	XDV
NOZZLE NO.	2 1
NOZZLE SIZE	1 12
SER. NO.	21032
DEPTH OUT	3842
DEPTH IN	3730
TOTAL FTG.	112
TOTAL HR. RUN	17
COND. OF BIT	
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME		8:00	
WEIGHT		9.3	
VISC.-SEC		65	
W.L.-C.C.		7.2	
FLTR. CK		2/32	
PH		9.5	
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.
GEL / 2400
DV/68 / 1 GAL.

DRILLER: Dave Fryfear

FOOTAGE		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'EL-P COM'D-C
3842		1					1000	5½	50			

DEVIATION RECORD: DEPTH 3842 / DEV. 2½° / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4⁰⁰	4¹⁵	¼	RIG SERVICE & CHECK B.O.P.
4¹⁵	5¹⁵	1	CIRC SAMPLE
5¹⁵	6⁰⁰	3/4	DUMMY TRIP 10 STANDS NO FILL
6⁰⁰	8⁰⁰	2	CIRC & CONDITION HOLE for DST # 2
8⁰⁰	10⁰⁰	2	TRIP OUT for D.S.T # 2 DOUBLE STRAP OUT.
10⁰⁰	11³⁰	1½	MAKE UP D.S.T # 2
11³⁰	12⁰⁰	½	~~RUN IN~~ WORK ON DRAWWORK

TALLY 3812.80
STRAP 3840.42
No Corr.
Jt. 2032

TOTAL DAY WORK	
NO. OF LINES	8
SIZE	1½
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	18
CUMULATIVE ROTATING HRS.	

APPROVED — APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 17 DATE DEC 20 19 70

OPERATOR: WESTERN DECALTA

LEASE: DECALTA ZRI ETAL KEELE RIVER

WELL NO.: 1-01 FIELD OR DIST.: KEELE RIVER COUNTY: STATE: N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO.: 9

DRILL PIPE STRING: NO. 2 SIZE 4½ TYPE THD. X.O. TOOL JOINT 6¼ O.D.

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	DB600	16"
2.	EMSCO	DB600	16"
3.			

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [illegible]

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		24 J55	18		13.90	547	300 SKS CLASS A CONST PLUS 3% CAL.

TIME DISTRIBUTION–HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7¼	½	2
REAMING			
CONDITIONING MUD & CIRCULATING		3¼	
TRIPS		2½	1½
LUBRICATE RIG	¼	¼	
DEVIATION SURVEY		¼	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			½
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER	¼	1¼	4
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.

NO. OF LINES 8 SIZE 1/8

LINE SLIPPED

FEET CUT OFF

PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

NO. OF DAYS FROM SPUD 17

CUMULATIVE ROTATING HRS.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
33	STANDS D.P.	3111.61	FT.
2	SINGLES D.P.	65.33	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	6.74	FT.
	TOTAL	3726	FT.
WT. OF STRING	96 M		LBS.

BIT RECORD		
BIT NO.	6	
SIZE	7⅞	
MFG.	H.W.	
TYPE	X.V.	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	20037	
DEPTH OUT		
DEPTH IN	3680	
TOTAL FTG.	46	
TOTAL HR. RUN	9	
COND. OF BIT	O.B.	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	1:00	3:00
WEIGHT	9.3	9.2
VISC.-SEC	70	45
W.L.-C.C.	8.6	8.8
FLTR. CK.	2/32	2/32
PH	10.5	11.0
SD. CONT. %		
PRESSURE GRADIENT		

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

DRILLER: Ted Bergman

FOOTAGE 49' 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	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C
3687	3726	D			90	8"-20m	1500	5½	60	5½		S

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER.
12:15	7:15	7	DRILL 7⅞" HOLE
7:15	7:30	¼	WORK PIPE
7:30	8:00	½	DRILL 7⅞" HOLE

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
33	STANDS D.P.	3174.94	FT.
2	SINGLES D.P.		FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	17.00	FT.
	TOTAL	3730	FT.
WT. OF STRING	96 000		LBS.

BIT RECORD		
BIT NO.	6	
SIZE	7⅞	
MFG.	HW	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	20037	
DEPTH OUT	3730	
DEPTH IN	3680	
TOTAL FTG.	50	
TOTAL HR. RUN	9½	
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	9:00	12:00
WEIGHT	9.3+	9.3
VISC.-SEC	87	80
W.L.-C.C.	8.2	8.0
FLTR. CK.	2/32	2/32
PH	9.5	9.5
SD. CONT. %		
PRESSURE GRADIENT		

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

GEL	250#	
DUCE	2 pail	

DRILLER: Brian [illegible]

FOOTAGE 4 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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C
3726	3730	D			90	15M	1000	5½	50			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3720	2°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK B.O.Ps
8:15	8:45	½	DRILL 7⅞" HOLE
8:45	10:00	1¼	CIR SAMPLE + WAIT ON ORDERS
10:00	11:00	1	10 STAND DUMMY TRIP
11:00	1:00	2	CIR PRIOR TO DST #2
1:00	1:15	¼	DROP SURVEY
1:15	2:45	1½	HOIST BIT #6
2:45	4:00	1¼	MAKE UP DST #2

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
33	STANDS D.P.	3111.61	FT.
2	SINGLES D.P.	65.32	FT.
18	D.C. 6¼ I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
		3724	FT.
	KELLY DOWN	[illegible]	FT.
	TOTAL	[illegible]	FT.
WT. OF STRING	96 000		LBS.

BIT RECORD		
BIT NO.	7	
SIZE	7⅞	
MFG.	HW	
TYPE	XDG	
NOZZLE NO.	2 2	
NOZZLE SIZE	11 12	
SER. NO.	21032	
DEPTH OUT	3744	
DEPTH IN	3730	
TOTAL FTG.	15	
TOTAL HR. RUN	2	
COND. OF BIT	O/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

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

DRILLER: [illegible]

FOOTAGE 15' 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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C
3730	3745	D			70	25	100	5½	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE + CHECK B.O.Ps
4:15	5:15	1	MAKE UP DST #2
5:15	5:45	½	LET down tool
[illegible]	9:00	[illegible]	RUN in w/ BIT #7
9:00	9:30	½	BREAK Circ
9:30	10:45	1¼	DRILL 7⅞" Hole
10:45	11:00	¼	REPAIR ROTARY CHAIN
11:15	[illegible]	[illegible]	DRILL 7⅞" Hole

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 16 — DATE DEC. 19 19 70

OPERATOR: WESTERN DECALTA

LEASE: DECALTA ET AL KEELE RIVER

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4 1/2 IN

TOOL JOINT: 6 1/4 O.D. TYPE THD. X.O.

PUMP NO.	MANUFACTURER
1.	EMSCO
2.	EMSCO
3.	

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [illegible]

WELL NO. 1-01 — FIELD OR DIST. KEELE RIVER — COUNTY — STATE N.W.T.

	TYPE	STROKE LENGTH	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	D 500	16								
	D 500	16								
LAST CASING TUBING OR LINER			8 5/8		25 J 55	18		1320	547	300 SKS CONST. PLUS 3% CAL.
				25 BOWLS		AHERN				

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			11 1/2
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS	1 1/2	2 3/4	2 1/2
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY	1/4		
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST	5 1/4	3	
OTHER		1	3
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SKABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	16

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
18	D.C. 6 1/4 I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD		
BIT NO.	5	
SIZE	7 7/8	
MFG.	HW	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	162 19	
DEPTH OUT	3680	
DEPTH IN	3393	
TOTAL FTG.	287	
TOTAL HR. RUN	22 1/4	
COND. OF BIT	4 1 1	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE

DRILLER: Sid Brown

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
	WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE

DRILLER: Brian Jackway

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
55	STANDS D.P.	3111.61	FT.
	SINGLES D.P.		FT.
18	D.C. 6 1/4 I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C/C O.D.	1.70	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	39.00	FT.
	TOTAL	3687	FT.
	WT. OF STRING	105 M	LBS.

BIT RECORD		
BIT NO.	6	
SIZE	7 7/8	
MFG.	HW	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	20037	
DEPTH OUT	3687	
DEPTH IN	3686	
TOTAL FTG.	7'	
TOTAL HR. RUN	1 1/2	
COND. OF BIT	2/3	
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	11:00	
WEIGHT	9.3	
VISC.-SEC	51	
W.L.-C.C.		
FLTR. CK		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE
CAUSTIC	100#	

DRILLER: [illegible]

WIRE LINE RECORD

REEL NO.

OF LINES 8 SIZE 1/2

AT SLIPPED

FEET CUT OFF

PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

NO. OF DAYS FROM SPUD 16

CUMULATIVE ROTATING HRS.

TOTAL DAY WORK

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK

HRS. W/DP

HRS. WO/DP

HRS. STANDBY

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
3680												

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3680	2 1/2							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	1/4	RIG SER.
12:15	12:30	1/4	DROP SURVEY
12:30	2:15	1 3/4	PULL OUT TO TEST (MEASURE OUT)
AMT. 2:15			MAKE UP TEST TOOL.
	8:00	5 3/4	DRILL STEM #1
			~~[illegible] DST #1~~

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	RIG SERVICE + CHECK BOP
8:15	10:15	2	RUN IN WITH DST #1
10:15	11:00	3/4	HEAD UP TEST
11:00	11:30	1/2	OPEN TOOL
11:30	12:00	1/2	INITIAL SHUT IN.
12:00	1:00	1	FLOW PERIOD
1:00	2:00	1	FINAL SHUT IN
2:00	2:15	1/4	TEAR OUT TESTING HEAD
2:15	4:00	1 3/4	HOIST DST #1.

FOOTAGE 7'

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
3680	3687	7			40	15/1000		5 1/2	57			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	INTERVAL	36.14'	TO	3680	REDUCED		120'	WATER CUT	

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
[illegible]	4:15	3/4	RIG SERVICE
4:15	5:00	3/4	FINISH HOISTING DST #1
5:00	7:00	2 1/2	REMOVE BP TEST TOOL - LAY DOWN
7:00	9:00	1 1/2	RUN IN W/ BIT #6
9:00	10:30	1 1/2	BREAK CIRC + CLEAN TO BOTTOM
			50' FILL
10:30	12:00	1 1/2	DRILL 7 7/8" HOLE

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 15 — DATE DEC 18 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ETAL KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. XO

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kubasewich

PUMPS	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	D500	16
2.	EMSCO	D500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	9⅝		24 J55	18		13.70	547	300 SKS CONST
	8⅝							PLUS 3% CAL.

25 BBLS AHEAD.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
31	STANDS D.P.	2923.63 FT.
2	SINGLES D.P.	62.61 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	34.24 FT.
	TOTAL	3558 FT.
WT. OF STRING	90m	LBS.

BIT RECORD		
BIT NO.	5	
SIZE	7⅞	
MFG.	H.W.	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	16219	
DEPTH OUT		
DEPTH IN	3393	
TOTAL FTG.	165	
TOTAL HR. RUN	12¾	
COND. OF BIT	0B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	12:00	4:00	7:00
WEIGHT	9.2	9.2	9.2
VISC.-SEC	40	38	46
W.L.-C.C.	9.0	9.2	7.4
FLTR. CK.	2/32	2/32	2/32
PH	8.5	8.5	9.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1000#		
CMC	100#		

DRILLER: Ted Bergum

FOOTAGE 102

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-P COM'D-C
3456	3558	D		FUEL 6½ FEET.	70	15m	1100	5½	50	6½		S

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3470	2¼°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER.
12:15	3:30	3¼	DRILL 7⅞" HOLE
3:30	3:45	¼	SURVEY @ 3470
3:45	8:00	4¼	DRILL 7⅞ HOLE

CEMENT INVENTORY
USED 772 SACKS TO DATE
532 ON LEASE. YET

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
32	STANDS D.P.	FT.
2	SINGLES D.P.	3080.02 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	23.00 FT.
	TOTAL	3640 FT.
WT. OF STRING	94,000	LBS.

BIT RECORD		
BIT NO.	5	
SIZE	7⅞	
MFG.	H.W.	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	16219	
DEPTH OUT	3640	
DEPTH IN	3393	
TOTAL FTG.	247	
TOTAL HR. RUN	18¾	
COND. OF BIT	0B.	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	9:00	12:00	3:00
WEIGHT	9.2	9.2	9.2
VISC.-SEC	41	39	43
W.L.-C.C.	7.6	7.8	7.6
FLTR. CK.	2/32	2/32	2/32
PH	9.5	8.0	8.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	3000#		
DV/68	1 gal		
Caustic	50#		

DRILLER: Brian Lockaway

FOOTAGE 82

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
3558	3640	D			90	15M	1000	5½	50			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3525	2		3590	2¼				

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK BOPs + ENGINE KILLS
8:15	8:30	¼	SURVEY 3525 - 2°
8:30	1:00	4½	DRILL 7⅞" HOLE
1:00	1:30	½	SURVEY 3590 - 2¼
1:30	1:45	¼	DRILL 7⅞" HOLE
1:45	2:45	1	CIR SAMPLE
2:45	4:00	1⅛	DRILL 7⅞" HOLE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
33	STANDS D.P.	3111.61 FT.
	SINGLES D.P.	FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	22.00 FT.
	TOTAL	3680 FT.
WT. OF STRING	94,000	LBS.

BIT RECORD		
BIT NO.	5	
SIZE	7⅞	
MFG.	H.W.	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	16219	
DEPTH OUT	3680	
DEPTH IN	3393	
TOTAL FTG.	287	
TOTAL HR. RUN	22¾	
COND. OF BIT	0B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	4:00	8.00	10:00
WEIGHT	9.3	9.3	9.3
VISC.-SEC	44	46	50
W.L.-C.C.	7.9	7.8	7.8
FLTR. CK	2/32	2/32	2/32
PH	8.0	8.5	8.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	1300#		
CAUSTIC	50#		
DV/68	1 GAL		

DRILLER: Dave Fryfogel

FOOTAGE 40'

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
3640	3680	D			90	15M	1000	5½	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE
4:15	7:45	3½	DRILL 7⅞" HOLE
7:45	9:30	1¾	CIRC. SAMPLE & WAIT ON ORDER
9:30	10:30	1	DUMMY TRIP 10 STAND
10:30	12:00	1½	CIRC

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	4¼	6	3½
REAMING			
CONDITIONING MUD & CIRCULATING SAMPLE		1	3¼
TRIPS			1
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	¼	¾	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES 8	SIZE 1⅛
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	15
CUMULATIVE ROTATING HRS.	

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 14 — DATE DEC 17 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DEC ALTA	DEC ALTA LAIRD KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 29 SIZE 7 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.H.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kuhosiewich

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	D500	16
2.	EMSCO	D500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		13.70	547	300 SKS CONST.
								PLUS 3% CAL.
		25 BBLS AHEAD						

TIME DISTRIBUTION–HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	11 1/4	6	5 1/4
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS		1 1/2	2 1/2
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY	1/4	1/4	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1/8; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 14; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
29	STANDS D.P.	2734.95 FT.
1	SINGLES D.P.	31.62 FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	21.21 FT.
	TOTAL	3325 FT.
WT. OF STRING	86 M	LBS.

BIT RECORD	
BIT NO.	4
SIZE	7 7/8
MFG.	H.W
TYPE	X.V.
NOZZLE NO.	2 1
NOZZLE SIZE	11 12
SER. NO.	18031
DEPTH OUT	
DEPTH IN	2850
TOTAL FTG.	475
TOTAL HR. RUN	38 1/4
COND. OF BIT	0/B
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	12.00	4.00 PM	7.00 AM
WEIGHT	9.1	9.2	9.2
VISC.–SEC	45	39	42
W.L.–C.C.	9.6	10.0	10.0
FLTR. CK.	2/32	1/32	2/32
PH	9.0	9.0	
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
D.V.68	1 GAL		
GEL	1000		
CMC	100		

DRILLER: Ted Bergman

FOOTAGE 101'

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–P COM'D–C
3218	3325	D			70	24	1100	5 1/2	51	5 1/2		

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3218	1 1/2							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12.00	12.15	1/4	RG SER.
12.15	2.30	2 1/4	DRILL 7 7/8 HOLE
2.30	2.45	1/4	SURVEY @ 3218
2.45	8.00	5 1/4	DRILL 7 7/8 HOLE

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
30	STANDS D.P.	2829.32 FT.
	SINGLES D.P.	FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	26.00 FT.
	TOTAL	3393 FT.
WT. OF STRING	88 000	LBS.

BIT RECORD	
BIT NO.	4
SIZE	7 7/8
MFG.	HW
TYPE	XV
NOZZLE NO.	2 1
NOZZLE SIZE	11 12
SER. NO.	18031
DEPTH OUT	3393
DEPTH IN	2850
TOTAL FTG.	543
TOTAL HR. RUN	44 1/4
COND. OF BIT	8/21
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	9.00	12:00	
WEIGHT	9.1+	9.1+	
VISC.–SEC	57	43	
W.L.–C.C.	10	8.2	
FLTR. CK.	2/32	2/32	
PH	9.0	9.0	
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	1000#	D.V.68	1 gal.
CAUSTIC	50#		
CMC	50#		

DRILLER: Brian Lodoway

FOOTAGE 68

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
3325	3393				70	24M	1100	5 1/2	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	RIG SERVICE + CHECK B.O.Ps
8:15	2:15	6	DRILL 7 7/8 HOLE
2:15	2:30	1/4	DROP SURVEY
2:30	4:00	1 1/2	HOIST BIT #4

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
30	STANDS D.P.	2829.32 FT.
2	SINGLES D.P.	62.67 FT.
18	D.C. 6 1/4 I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O. O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	28.00 FT.
	TOTAL	3456 FT.
WT. OF STRING	90,000	LBS.

BIT RECORD	
BIT NO.	5
SIZE	7 7/8
MFG.	HW
TYPE	XV
NOZZLE NO.	2 1
NOZZLE SIZE	11 12
SER. NO.	162.19
DEPTH OUT	3456
DEPTH IN	3393
TOTAL FTG.	63'
TOTAL HR. RUN	5 1/4
COND. OF BIT	0/B
REAMER NO.	
REAMER TYPE	

MUD RECORD			
TIME	8:00	10:00	
WEIGHT	9.2	9.3	
VISC.–SEC	43	43	
W.L.–C.C.	8.9	8.0	
FLTR. CK	2/32	2/32	
PH	8.0	8.0	
SD. CONT. %		.05%	
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
CAUSTIC	50		

DRILLER: David Fryberg

FOOTAGE 63'

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
3393	3456	D			70	15M	1100	5 1/2	50			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3393	2°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4.00	4.15	1/4	RIG SERVICE
4.15	6.45	2 1/2	COMPLETED TRIP FOR BIT #5 NO-FILL
6.45	12.00	5 1/4	DRILL 7 7/8 HOLE

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 13 — DATE DEC 16 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ETAL KEELE RIVER	F01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.O

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kubasewich

PUMPS	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16"
2.	EMSCO	G500	16"
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		13.70	547	300 SKS CONST PLUS 3% CAL.
		25 BBLS WATER AHEAD.						

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
96	STANDS D.P.	2452.24 FT.
1	SINGLES D.P.	31.28 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	41.00 FT.
	TOTAL	3061.84 FT.
WT. OF STRING	83,m.	LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7⅞	
MFG.	H.W.	
TYPE	XV.	
NOZZLE NO.	2 1	
NOZZLE SIZE	11.12	
SER. NO.	18031	
DEPTH OUT		
DEPTH IN	2850	
TOTAL FTG.	211	
TOTAL HR. RUN	16¼	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	2 AM	4 AM	6 AM
WEIGHT	9.2	9.2	9.2
VISC.-SEC	37	39	40
W.L.-C.C.	10.2	9.8	9.6
FLTR. CK.	1/32	1/32	2/32
PH	9.0	9.0	9.0
SD. CONT. %			
PRESSURE GRADIENT			

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

DRILLER: Ed Bergum

FOOTAGE 83'

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
2978	3061	D		58' FUEL	70	20m	1050	5½	51			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3030'	1°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER
12:15	7:45	7½	DRILL 7⅞" HOLE
7:45	8:00	¼	SURVEY @ 3036

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR		
97	STANDS D.P.	2546.48 FT.
1	SINGLES D.P.	31.45 FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	30.00 FT.
	TOTAL	3145 FT.
WT. OF STRING	84,000	LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7⅞	
MFG.	HW	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	18031	
DEPTH OUT	3145	
DEPTH IN	2850	
TOTAL FTG.	295	
TOTAL HR. RUN	24	
COND. OF BIT	OB	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	11:00	12:00	3:00
WEIGHT	9.2	9.2	9.2
VISC.-SEC	39	38	41
W.L.-C.C.	9.0	8.4	8.2
FLTR. CK.	2/32	2/32	2/32
PH	9.0	9.0	9.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.
GEL 250 lbs
DV 69 1 gal

DRILLER: Brian Sadowey

FOOTAGE 84'

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
3061	3145	D			70	20	1050	5½	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK B.O.Ps
8:15	4:00	7¾	DRILL 7⅞" HOLE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR		
98	STANDS D.P.	2640.61 FT.
	SINGLES D.P.	FT.
18	D.C. 6¼ I.D. O.D.	534.91 FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
1	SUBS X.O O.D.	1.76 FT.
	BIT OR C.B.	.65 FT.
		FT.
	KELLY DOWN	41.00 FT.
	TOTAL	3218 FT.
WT. OF STRING	85,000	LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7⅞	
MFG.	H.W.	
TYPE	XV	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	18031	
DEPTH OUT	3218	
DEPTH IN	2850	
TOTAL FTG.	368	
TOTAL HR. RUN	30¾	
COND. OF BIT	0/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	4:00	6:00	10:00
WEIGHT	9.3	9.2	9.2
VISC.-SEC	43	40	43
W.L.-C.C.	8.5	7.2	8.5
FLTR. CK	3/32	3/32	3/32
PH	8.0	8.0	8.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.
DV 68 1 GAL
CAUSTIC 50
GEL 1000

DRILLER: Dave Fryfogel

FOOTAGE 73

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
3145	3218				70	20 24	1050	5½	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE
4:15	5:00	¾	DRILL 7⅞" HOLE
5:00	6:00	1	DUMMY TRIP 6 STANDS TO RETRIEVE RUBBERS
6:00	12:00	6	DRILL 7⅞" HOLE

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	11¼	7¾	6¾
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			1
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	¼		
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK	
HRS. W/DP	
HRS. WO/DP	
HRS. STANDBY	
TOTAL DAY WORK	

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	8 SIZE 1/8
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	13
CUMULATIVE ROTATING HRS.	

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 12 — DATE DEC 15 1990

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARIETAL KEELE RIVER.	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 19 SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.O

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kubasiewicz

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16"
2.	EMSCO	G500	16"
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		1370	541	300 SKS Const
								Plus 3% CaCl
		25 BBLS AHEAD						

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL		17 3/4	
REAMING			
CONDITIONING MUD & CIRCULATING		5	
TRIPS		1 3/4	
LUBRICATE RIG		1/4	1/4
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT	8		
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS		8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE 1 1/8; FEET SLIPPED 49'; FEET CUT OFF 49'; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 12; CUMULATIVE ROTATING HRS.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7 7/8	
MFG.	H.W	
TYPE	X.V.	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	18031	
DEPTH OUT		
DEPTH IN	2850	
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
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	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
2850								5 1/2		5 1/2		

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	8 00	8	W.O.C IN CELLAR
			ON LOCATION 214 JTS 4 1/2 XH 16.6
			GRADE E #2 DRILL PIN
			30 JOINTS 6 1/4 OD DRILL COLLARS. W/
			4 1/2 H90 PIN TO BOX. 1 DC. BHC W/ 4 1/2 REG
			BOX. X 4 1/2 H90 BOX

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
24	STANDS D.P.		FT.
1	SINGLES D.P.	2294.29	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	28.00	FT.
	TOTAL	2860	FT.
WT. OF STRING		82,000	LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7 7/8	
MFG.	HW	
TYPE	XU	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	18031	
DEPTH OUT	2860	
DEPTH IN	2850	
TOTAL FTG.	10	
TOTAL HR. RUN	1	
COND. OF BIT	O.B.	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	3 00		
WEIGHT	9.2+		
VISC.-SEC	35		
W.L.-C.C.	9.2		
FLTR. CK.	2/32		
PH	9.0		
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
DRILLER	Brian Sodomsky		

FOOTAGE 10 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. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
2850	2860	D			70	20M	1100	5 1/2	52			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	RIG SERVICE & CHECK BOPs
8:15	10 00	1 3/4	RUN IN W/ BIT # 4
10 00	3:00	5	CLEAN OUT TO BTM. 180'
3:00	4:00	1	DRILL 7 7/8" HOLE

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
25	STANDS D.P.	2358.36	FT.
2	SINGLES D.P.	62.43	FT.
18	D.C. 6 1/4 I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	29.00	FT.
	TOTAL	2978	FT.
WT. OF STRING		83,000	LBS.

BIT RECORD		
BIT NO.	4	
SIZE	7 7/8	
MFG.	H.W.	
TYPE	X.V.	
NOZZLE NO.	2 1	
NOZZLE SIZE	11 12	
SER. NO.	18031	
DEPTH OUT	2978	
DEPTH IN	2850	
TOTAL FTG.	128	
TOTAL HR. RUN	8 3/4	
COND. OF BIT	O/B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	4:00	7:00	10:00
WEIGHT	9.2	9.2	9.2
VISC.-SEC	35	35	37
W.L.-C.C.	10	10	8
FLTR. CK	2/32	2/32	2/32
PH	8.0	8.5	8.5
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
GEL	2500	CMC	50
BV/68	1 GAL		
CAUSTIC	50		
DRILLER	Dave Fryfogel		

FOOTAGE 118' 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. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
2860	2978	D			70	20M	1050	5 1/2	50			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	4 15	1/4	RIG SERVICE & ✓ BOP'S
4 15	12 00	7 3/4	DRILL 7 7/8" HOLE

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 11 — DATE DEC 14 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI. ETAL KEELE RIVER	7-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Kulosewich

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16
2.	EMSCO	G500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		24 J55	18		12.70	647	300 SKS CONST.
								PLUS 32 CAL
		25 BBLS WATER AHEAD.						

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES 8	SIZE 1⅛
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	11
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
	D.C. I.D. O.D.	FT.	TYPE		W.L.-C.C.	
	STB. BODY O.D.	FT.	NOZZLE NO.		FLTR. CK.	
	STB. BODY O.D.	FT.	NOZZLE SIZE		PH	
	RMR. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	SUBS O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	BIT OR C.B.	FT.	DEPTH IN			
		FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	KELLY DOWN	FT.	TOTAL HR. RUN			
	TOTAL	FT.	COND. OF BIT			
WT. OF STRING		LBS.	REAMER NO.			
			REAMER TYPE		DRILLER Ed Bryson	

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
2850												

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12⁰⁰	3⁰⁰	3	LEVEL RIG.
3⁰⁰	6⁰⁰	3	INSTALL ~~BOP~~'s. CAMERON 10" x 600 SERIES
			BY 8⅝" SLIP ON CASING BOWEL TYPE.
			PREHEATED SAME WELDED W/ 2 PASSES ON
			INSIDE & 3 ON OUT SIDE.
6⁰⁰	8⁰⁰	2	INSTALL BOPS.

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
	D.C. I.D. O.D.	FT.	TYPE		W.L.-C.C.	
	STB. BODY O.D.	FT.	NOZZLE NO.		FLTR. CK.	
	STB. BODY O.D.	FT.	NOZZLE SIZE		PH	
	RMR. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	SUBS O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	BIT OR C.B.	FT.	DEPTH IN			
		FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	KELLY DOWN	FT.	TOTAL HR. RUN			
	TOTAL	FT.	COND. OF BIT			
WT. OF STRING		LBS.	REAMER NO.			
			REAMER TYPE		DRILLER Brian Lodoway	

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8⁰⁰	12:00	4	CEMENTING CELLAR W/ B.J. USED 300 SACKS
~~12⁰⁰~~	~~4⁰⁰~~	4	CONSTRUCTION CEMENT 2 SACK CACL2
12:00	4:00	4	NIPPLE UP B.O.PS.

NOTE- LAST 50 SKS OF CEMENT MIXED @ 4⁰⁰ PM
CEMENT SETTLING

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
	D.C. I.D. O.D.	FT.	TYPE		W.L.-C.C.	
	STB. BODY O.D.	FT.	NOZZLE NO.		FLTR. CK.	
	STB. BODY O.D.	FT.	NOZZLE SIZE		PH	
	RMR. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	SUBS O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	BIT OR C.B.	FT.	DEPTH IN			
		FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	KELLY DOWN	FT.	TOTAL HR. RUN			
	TOTAL	FT.	COND. OF BIT			
WT. OF STRING		LBS.	REAMER NO.			
			REAMER TYPE		DRILLER Dave Fryker	

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4⁰⁰	8⁰⁰	8	NIPPLE UP B.O.PS

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 10 — DATE DEC 13 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ET AL KEELE RIVER	I-01	KEELE RIVER.		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. / SIZE — TOOL JOINT O.D. 6 1/4 — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE: [illegible]

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: [illegible]

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16"
2.	EMSCO	G500	16"
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		13.10	547	300 SKS CONST. PLUS 32 OAL.
		25 BBLS WATER AHEAD.						

TIME DISTRIBUTION-HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG DIG CELLAR	8	8	
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS		8	

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD

REEL NO.; NO. OF LINES 8 SIZE 11/8; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 10; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR: STANDS D.P. FT.; SINGLES D.P. FT.; D.C. I.D. O.D. FT.; D.C. I.D. O.D. FT.; STB. BODY O.D. FT.; STB. BODY O.D. FT.; RMR. BODY O.D. FT.; SUBS O.D. FT.; BIT OR C.B. FT.; FT.; KELLY DOWN FT.; TOTAL FT.; WT. OF STRING LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED TYPE AMT. TYPE AMT.; DRILLER Ed Bergum

FOOTAGE: FROM 2850 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 S.P.M.; PUMP NO. LINER SIZE 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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	8:00	8	DIG CELLAR.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR: STANDS D.P. FT.; SINGLES D.P. FT.; D.C. I.D. O.D. FT.; D.C. I.D. O.D. FT.; STB. BODY O.D. FT.; STB. BODY O.D. FT.; RMR. BODY O.D. FT.; SUBS O.D. FT.; BIT OR C.B. FT.; FT.; KELLY DOWN FT.; TOTAL FT.; WT. OF STRING LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED TYPE AMT. TYPE AMT.; DRILLER Brian Sadowy

FOOTAGE: 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 S.P.M.; PUMP NO. LINER SIZE 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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	4:00	8	DIG CELLAR. VERY FIRM.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR: STANDS D.P. FT.; SINGLES D.P. FT.; D.C. I.D. O.D. FT.; D.C. I.D. O.D. FT.; STB. BODY O.D. FT.; STB. BODY O.D. FT.; RMR. BODY O.D. FT.; SUBS O.D. FT.; BIT OR C.B. FT.; FT.; KELLY DOWN FT.; TOTAL FT.; WT. OF STRING LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK; PH; SD. CONT. %; PRESSURE GRADIENT; MUD & CHEMICALS ADDED TYPE AMT. TYPE AMT.; DRILLER Dave Frykas

FOOTAGE: 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 S.P.M.; PUMP NO. LINER SIZE 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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	8:00	4	DIG CELLAR DOWN 9' FIRM.
8:00	9:00	1	WELD SLIP ON COLLAR.
9:00	12:00	3	LEVEL RIG

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 9 — DATE DEC 12 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ERI ET AL KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. XO.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: Joe Lukasewich

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16"
2.	EMSCO	G500	16"
3.			

LAST CASING TUBING OR LINER

SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
8⅝		24 J55	18		13.70	547	300 SKS CONST.
							Plus 32 cal.
	25 BBLS. WATER AHEAD.						

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	7	3¾	
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS		1¾	
LUBRICATE RIG	1¼	¼	1¼
DEVIATION SURVEY		½	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG	3¼		
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER		2¼	7¾
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES 8 SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 9; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
23	STANDS D.P.	2167.90	FT.
2	SINGLES D.P.	63.00	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	21.78	FT.
	TOTAL	2799.00	FT.
WT. OF STRING	88 m.		LBS.

BIT RECORD: BIT NO. 3; SIZE 7⅞; MFG. HW; TYPE XV; NOZZLE NO. 3, SIZE 11; SER. NO. 20381; DEPTH OUT; DEPTH IN 2626; TOTAL FTG. 164; TOTAL HR. RUN 9¼; COND. OF BIT OB; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	12:00	2:00	6:00
WEIGHT	9.2	9.2	9.2
VISC.-SEC	45	43	40
W.L.-C.C.	8.5	8.5	9.0
FLTR. CK.	2/32	2/32	2/32
PH	8.5	8.5	8.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
Gel	1000#		
DF-68	1 gal.		
CMC	100#		

DRILLER: Joe Bergum

FOOTAGE 130'

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
2660	2790	D			80	30m	1150	5½	58			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER.
12:15	4:00	3¾	DRILL 7⅞ HOLE
4:00	4:30	½	WORK ON #2 PUMP
4:30	6:15	1¾	DRILL 7⅞" HOLE
6:15	6:30	¼	WORK ON #2 PUMP.
6:30	8:00	1½	DRILL 7⅞" HOLE

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
24	STANDS D.P.		FT.
1	SINGLES D.P.	229.29	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	18.00	FT.
	TOTAL	2850	FT.
WT. OF STRING	m.		LBS.

BIT RECORD: BIT NO. 3; SIZE 7⅞; MFG. HW; TYPE XV; NOZZLE NO. 3, SIZE 11; SER. NO. 20381; DEPTH OUT 2850; DEPTH IN 2626; TOTAL FTG. 224; TOTAL HR. RUN 12½; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD

TIME	9:00	11:00
WEIGHT	9.3	9.2
VISC.-SEC	45	40
W.L.-C.C.	6.2	6.6
FLTR. CK.	2/32	2/32
PH	9.0	9.0
SD. CONT. %		
PRESSURE GRADIENT		

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

DRILLER: Brian Lodoway

FOOTAGE 60

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
2790	2850				80	20m	1200	5½	58			

DEVIATION RECORD: DEPTH 2800 / DEV. 1° / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE + CHECK BOPs
8:15	10:45	2½	DRILL 7⅞" HOLE
10:45	11:15	½	SURVEY AT 2800 - 1°
11:15	12:00	¾	DRILL 7⅞" HOLE
12:00	1:00	1	BAIL CELLER TO FIND ~~LEAK~~ CRACK IN CASING
1:00	2:45	1¾	HOIST BIT #3
2:45	4:00	1¼	BAIL CELLER + WAIT ON WELDER TO WELD CRACKED CASING

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
24	STANDS D.P.	2294.29	FT.
	SINGLES D.P.		FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X/O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	18.00	FT.
	TOTAL	2850	FT.
WT. OF STRING			LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO., SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK; PH; SD. CONT. %; PRESSURE GRADIENT

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

NIL

DRILLER: Dave Fogbase

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
2850												

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE
4:15	7:00	2¾	WAIT ON WELDER, BAIL CELLAR
7:00	9:00	2	LAY DOWN B.O.P.'S
9:00	12:00	3	DIG CELLAR DEEPER

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 8 — DATE DEC 11 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ET AL KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsay

PUMPS	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G 500	K
2.	EMSCO	G 500	K
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		13.76	547	200 SKS. CONST. PLUS 32 CAL

35 BBLS. WATER AHEAD

MORNING TOUR

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	1 1/4	7 3/4	4 1/4
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			3 1/4
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY	1/4	1/2	
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			1/4
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

DRILLING ASSEMBLY AT END OF TOUR	NO.		
STANDS D.P.	20	1885.04	FT.
SINGLES D.P.	1	31.50	FT.
D.C. I.D. O.D.	8	534.91	FT.
D.C. I.D. O.D.			FT.
STB. BODY O.D.			FT.
STB. BODY O.D.			FT.
RMR. BODY O.D.			FT.
SUBS X.O. O.D.	1	1.76	FT.
BIT OR C.B.		.65	FT.
			FT.
KELLY DOWN		36.14	FT.
TOTAL		2490.-	FT.
WT. OF STRING 85 m			LBS.

BIT RECORD		
BIT NO.	2	
SIZE	7 7/8	
MFG.	H.W.	
TYPE	X.IC	
NOZZLE NO.	3	
NOZZLE SIZE	11	
SER. NO.	23677	
DEPTH OUT		
DEPTH IN	2053	
TOTAL FTG.	437	
TOTAL HR. RUN	8 1/4	
COND. OF BIT	2B	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	12:00	1:00	6:00
WEIGHT	9.1	9.1	9.1
VISC.-SEC	37	40	45
W.L.-C.C.	12.0	8.0	5.2
FLTR. CK.	2/32	2/32	2/32
PH	8.5	8.5	8.5
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: Gel 2000#; CMC 200#

DRILLER: Ed Boyum

FOOTAGE 100'	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
	2390	2490	D.			78	15M 18M	1150	5 1/2	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	24	1/4							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	12 15	1/4	RG SER.
12 15	2 45	2 1/2	DRILL 7 7/8" HOLE
2 45	3 00	1/4	SURVEY @ 2400
3 00	8 00	5	DRILL 7 7/8" HOLE
			4 FT. FILL
			WORK AIR CLUTCHES EVERY 2 HRS.

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR	NO.		
STANDS D.P.	21		FT.
SINGLES D.P.	2	2041.72	FT.
D.C. I.D. O.D.	8	534.91	FT.
D.C. I.D. O.D.			FT.
STB. BODY O.D.			FT.
STB. BODY O.D.			FT.
RMR. BODY O.D.			FT.
SUBS X.O. O.D.	1	1.76	FT.
BIT OR C.B.		.65	FT.
			FT.
KELLY DOWN		26.00	FT.
TOTAL		2605	FT.
WT. OF STRING 86,000			LBS.

BIT RECORD		
BIT NO.	2	
SIZE	7 7/8	
MFG.	HW	
TYPE	XIG	
NOZZLE NO.	3	
NOZZLE SIZE	11	
SER. NO.	23677	
DEPTH OUT	2605	
DEPTH IN	2053	
TOTAL FTG.	552	
TOTAL HR. RUN	25 1/2	
COND. OF BIT	DRILLING	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	9:00	12:00	3:00
WEIGHT	9.2	9.2	9.1+
VISC.-SEC	37	37	40
W.L.-C.C.	2.8	7.6	6.2
FLTR. CK.	2/32	2/32	2/32
PH	9.5	9.5	9.0
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: GEL 12 sx; CMC 100#; Caustic 50#; DV 64 1 gal.

DRILLER: Brian Johnson

FOOTAGE 115	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
	2490	2500.	DR.			78	18M	1150	5 1/2	58			
	2500	2605				110	18M	1150	5 1/2	58			
						110	20M	1150	5 1/2	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	2500	1 1/8°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	RIG SERVICE; CHECK HYDRIL; CHECK KELLY COCK
8:15	10:15	2	DRILL 7 7/8" HOLE
10:15	10:45	1/2	SURVEY AT 2500 1 1/8°
10:45	4:00	5 1/4	DRILL 7 7/8" HOLE
			WORK CLUTCHES EVERY 2 HRS

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR	NO.		
STANDS D.P.	22	2073.24	FT.
SINGLES D.P.	1	31.59	FT.
D.C. I.D. O.D.	18	534.91	FT.
D.C. I.D. O.D.			FT.
STB. BODY O.D.			FT.
STB. BODY O.D.			FT.
RMR. BODY O.D.			FT.
SUBS X.O. O.D.	1	1.76	FT.
BIT OR C.B.		.65	FT.
			FT.
KELLY DOWN		18.00	FT.
TOTAL		2660	FT.
WT. OF STRING 86,000			LBS.

BIT RECORD		
BIT NO.	2	3
SIZE	7 7/8	7 7/8
MFG.	H.W.	HW
TYPE	XIG	XV
NOZZLE NO.	3	3
NOZZLE SIZE	11	11
SER. NO.	23677	20381
DEPTH OUT	2626	
DEPTH IN	2053	2626
TOTAL FTG.	573	34
TOTAL HR. RUN	27 1/2	2 1/4
COND. OF BIT	2 3 1	1/8
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	4:00		11:00
WEIGHT	9.2		9.2
VISC.-SEC	40		38
W.L.-C.C.			8
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED: GEL 800

DRILLER: Dave Fraser

FOOTAGE 55'	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
	2605	2626	D		CHANGED SEAT IN	110	20M	1150	5 1/2	58			
	2626	2660	D		NO I PUMP	80	20M	1150	5 1/2	58			

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	2626	3/4°							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	4 15	1/4	RIG SERVICE
4 15	6 45	2	DRILL 7 7/8" HOLE
6 15	7 45	1 1/2	TRIP OUT W/ BIT #2 STRAP OUT
7 45	9 30	1 3/4	RUN IN W/ BIT # 3
9 30	9 45	1/4	BREAK CIRC. NO FILL
9 45	12 00	2 1/4	DRILL 7 7/8" HOLE

STRAP = 2628.96
TALLY BOARD = 2628.61
DIFF. .35

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES 8	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	8
CUMULATIVE ROTATING HRS.	

TIME SUMMARY (OFFICE USE ONLY)	
DAY WORK	
HRS. W/DP	
HRS. WO/DP	
HRS. STANDBY	
TOTAL DAY WORK	

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 7 — DATE DEC 10 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA ARI ET AL KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 9 SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George [illegible]

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	6500	16
2.	EMSCO	6500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24 J55	18		13.70	547	BOWSER CONST.
								PLUS 32 CAL.
	26 BBLS. AHEAD							

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL		4	6 3/4
REAMING		2	
CONDITIONING MUD & CIRCULATING			
TRIPS	1 1/4	1 3/4	
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY			1/4
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG	6		
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	9	7

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES; SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD 7; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
6	STANDS D.P.	1412.17	FT.
	SINGLES D.P.	63.18	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS Y.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41 —	FT.
	TOTAL	2053 —	FT.
	WT. OF STRING	76 — M.	LBS.

BIT RECORD: BIT NO. 1; SIZE 7 7/8; MFG. H.W.; TYPE X1G; NOZZLE NO. 3 1; SIZE 11 10; SER. NO. 23677; DEPTH OUT 2053; DEPTH IN 547; TOTAL FTG. 506; TOTAL HR. RUN 31 1/4; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 1:00; WEIGHT 9.0; VISC.-SEC 34; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Ted Bergum

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
2053.						1/2	1500	5 1/2	58			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	12 15	1/4	RIG SER.
12 15	6 15	6	WORK ON FLOOR MOTORS
6 15	8 00	1 3/4	TRIP FOR BIT.

Ray Lestus 8 hours unthawing weasel tracks

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
17	STANDS D.P.		FT.
2	SINGLES D.P.	1665.11	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS Y.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41.00	FT.
	TOTAL	2243	FT.
	WT. OF STRING	80 000	LBS.

BIT RECORD: BIT NO. 2; SIZE 7 7/8; MFG. H.W.; TYPE X1G; NOZZLE NO. 3; SIZE 11; SER. NO. 23677; DEPTH OUT 2243; DEPTH IN 2053; TOTAL FTG. 190; TOTAL HR. RUN 4; COND. OF BIT DRILLING. 2V.6B 1/16"; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 2:00 3:00; WEIGHT 9.2 9.2; VISC.-SEC 31 33; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: BEL 1400# / CMC 100

DRILLER: Brian Lidaway

FOOTAGE 190

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
2053	2243	D			78	20M	1100	5 1/2	58			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	RIG SERVICE + CHECK B.O.P.S.
8:15	[redacted]	[redacted]	[redacted]
[redacted]	10:00	[redacted]	[redacted]
2:00	4:00	4	[redacted]
8:15	10:00	1 3/4	RUN in WITH Bit #2
10:00	12:00	2	BREAK CIR & CLEAN 80 ft fill
12:00	4:00	4	DRILL 7 7/8 HOLE

WORK AIR CLUTCHES EVERY 2 HRS.

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
19	STANDS D.P.	1790.37	FT.
1	SINGLES D.P.	31.39	FT.
18	D.C. I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS Y.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	30.00	FT.
	TOTAL	2390.07	FT.
	WT. OF STRING	83000	LBS.

BIT RECORD: BIT NO. 2; SIZE 7 7/8; MFG. H.W.; TYPE X1G; NOZZLE NO. 3; SIZE 11; SER. NO. 23677; DEPTH OUT 2390; DEPTH IN 2053; TOTAL FTG. 337; TOTAL HR. RUN 10 3/4; COND. OF BIT 0/8; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 4:00 8.00 10:00; WEIGHT 9.2 9.1 9.0; VISC.-SEC 38 38 36; W.L.-C.C. 14 12 10; FLTR. CK; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: BEL 1200 / CMC 100

DRILLER: Dave Fryklund

FOOTAGE 197

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
2243	2390	D			76	30M 30M	1100	5 1/2	58			

DEVIATION RECORD: DEPTH 2211 / DEV. 1 3/4° / DIRECTION 2305 / DEPTH 1 1/2° / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	4 15	1/4	RIG SERVICE + CHECK B.O.P.S
4 15	4 30	1/4	SURVEY @ 2211
4 30	8 15	3 3/4	DRILL 7 7/8" HOLE
8 15	8 30	1/4	SURVEY @ 2306
8 30	10 00	1 1/2	DRILL 7 7/8" HOLE
10 00	10 30	1/2	LEVEL RIG
10 30	12 00	1 1/2	DRILL 7 7/8" HOLE

WORK AIR CLUTCHES EVERY 2 HRS.

APPROVED — APPROVED

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

DAILY DRILLING REPORT

REPORT NO. 6 DATE DEC 9 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ET AL KEELE RIVER	1-01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6¼ O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George [illegible]

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16
2.	EMSCO	G500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8⅝		24 J55	18		13.70	547	300 SXS CONST. PLUS 32 CAL.

95 BBLS. WATER AHEAD.

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	11¼	7¾	6
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	¼		¼
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			½
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			1
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK

HRS. W/DP

HRS. WO/DP

HRS. STANDBY

TOTAL DAY WORK

WIRE LINE RECORD

REEL NO.

NO. OF LINES 8 SIZE

FEET SLIPPED

FEET CUT OFF

PRESENT LENGTH

TON MI. OR TRIPS SINCE LAST CUT

CUMULATIVE TON MI. OR TRIPS

NO. OF DAYS FROM SPUD 6

CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
11	STANDS D.P.	1035.69	FT.
	SINGLES D.P.	29.90	FT.
	D.C.		
18	I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	38.09	FT.
	TOTAL	1631.00	FT.

WT. OF STRING 72 m LBS.

BIT RECORD

BIT NO.		1	
SIZE		7⅞	
MFG.		HW	
TYPE		X1G	
NOZZLE	NO.	2	1
	SIZE	11	10
SER. NO.		24679	
DEPTH OUT			
DEPTH IN		547	
TOTAL FTG.		1084	
TOTAL HR. RUN		17½	
COND. OF BIT		OB	
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	2:00	4:00	6:00
WEIGHT	9.6	9.8	9.0
VISC.-SEC	28	28	28
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER Ted Bergum

FOOTAGE 301'

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
1330	1631	D			85	23m	1300	5½	58			
					75	20m						
						16m						

DEVIATION RECORD: DEPTH 1456' DEV. 1¼ — DIRECTION — DEPTH 1550' DEV. 1¼ — DIRECTION — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12⁰⁰	12¹⁵	¼	R.C SER.
12¹⁵	2⁰⁰	2	DRILL 7⅞ HOLE
2¹⁵	2³⁰	1¼	SURVEY @ 1456
2³⁰	6¹⁵	3¾	DRILL 7⅞ HOLE
6¹⁵	6³⁰	¼	SURVEY @ 1550'
6³⁰	8⁰⁰	1½	DRILL 7⅞ HOLE

6½ FUEL

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
14	STANDS D.P.	1317.80	FT.
	SINGLES D.P.		FT.
	D.C.		
18	I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS X.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41.00	FT.
	TOTAL	1896	FT.

WT. OF STRING 74,000 LBS.

BIT RECORD

BIT NO.		1	
SIZE		7⅞	
MFG.		HW	
TYPE		X1G	
NOZZLE	NO.	2	1
	SIZE	11	10
SER. NO.		24679	
DEPTH OUT		1896	
DEPTH IN		547	
TOTAL FTG.		1349	
TOTAL HR. RUN		25¼	
COND. OF BIT		DRILLING	
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	10:00	12:00	2:00
WEIGHT	9.1	9.1	9.1
VISC.-SEC	28	28	28
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	1000#		
DAV68	1 GAL		

DRILLER Brian Lodmay

FOOTAGE 265

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
1631	1896	DR.			70	18M	1100	5½	58			
						20M						

DEVIATION RECORD: DEPTH — DEV. — DIRECTION — DEPTH — DEV. — DIRECTION — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	¼	RIG SERVICE & CHECK TOPS. CHECK KELLY COCK
8:15	4:00	7¾	DRILL 7⅞" HOLE

8

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
15	STANDS D.P.	1412.17	FT.
2	SINGLES D.P.	63.18	FT.
	D.C.		
18	I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C/O O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41.00	FT.
	TOTAL	2053.65	FT.

WT. OF STRING LBS.

BIT RECORD

BIT NO.		1	
SIZE		7⅞	
MFG.		HW	
TYPE		X1G	
NOZZLE	NO.	2	1
	SIZE	11	10
SER. NO.		24679	
DEPTH OUT		2053	
DEPTH IN		547	
TOTAL FTG.		1506	
TOTAL HR. RUN		31¼	
COND. OF BIT		O/B	
REAMER NO.			
REAMER TYPE			

MUD RECORD

TIME	4:00	8:00	1:00
WEIGHT	9.1	9.0	8.9
VISC.-SEC	32	32	32
W.L.-C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.
GEL	2600		

DRILLER Dave Tanbad

FOOTAGE 157

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
1896	2053	D										

DEVIATION RECORD: DEPTH 1864 DEV. 1° — DIRECTION — DEPTH — DEV. — DIRECTION — DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4⁰⁰	4¹⁵	¼	RIG SERVICE
4¹⁵	4³⁰	¼	SURVEY @ 1864 1°
4³⁰	6⁰⁰	1½	DRILL 7⅞" HOLE
6⁰⁰	6³⁰	½	WORK ON PUMPS
6³⁰	8³⁰	2	DRILL 7⅞" HOLE
8³⁰	9³⁰	1	LEVEL RIG
9³⁰	12⁰⁰	2½	DRILL 7⅞" HOLE

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 5 — DATE DEC 8 1970

OPERATOR	LEASE	WELL NO.	FIELD OR EXT.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ET AL KEEL RIVER	F01	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwin

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	G500	16
2.	EMSCO	G500	16
3.			

LAST CASING TUBING OR LINER	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
	8 5/8		24.55	18	547'	13.70	547'	300 SKS CONST.
								PLUS 3% CAL.
		25 BBLS. WATER AHEAD						

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL		3	7 1/4
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG		1/4	1/4
DEVIATION SURVEY			1/2
TEST B.O.P.	4		
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER		4 3/4	
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	4	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES — SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
16	D.C. I.D. O.D.	475.30	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C.O. O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD: BIT NO. 1; SIZE 7 7/8; MFG. HW; TYPE X.1.G.; NOZZLE NO. 2 1; NOZZLE SIZE 11 10; SER. NO. 24679; DEPTH OUT; DEPTH IN 547; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Ted Bergum

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
547		4 AM		BLOW OUT ALL LINES.				5 1/2	56			
		7 PM		8 00 DRIL OUT SHOE								

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION — CEMENT CELLAR w/ 60 SAK

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	2 00	2	FINISH NIPPLEING UP B.O.P's
2 00	4 00	2	CEMENT CELLAR.
4 00	4 30	1/2	PRESSURE UP BLIND RAMS 1500# (HELD OKAY)
4 30	5 30	1	PICK UP BOTTOM HOLE COLLAR. + RUN IN HOLE
5 30	5 45	1/4	PRESSURE UP ON PIPE RAMS 1500# (HELD OKAY)
5 45	6 45	1	PRESSURE UP ON HYDRIL 1500# (HELD OKAY)
6 45	6 45	1/2	PRESSURE MANIFOLD 1500# (HELD OKAY)
6 45	7 00	1/4	TEST MOTOR SHUT OFF'S (WORKED OKAY)

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
2	STANDS D.P.	188.16	FT.
	SINGLES D.P.		FT.
18	D.C. 6 1/4 I.D. O.D.	534.91	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41.00	FT.
	TOTAL	767	FT.
WT. OF STRING		62,000	LBS.

BIT RECORD: BIT NO. 1; SIZE 7 7/8; MFG. HW; TYPE X1G; NOZZLE NO. 2 1; NOZZLE SIZE 11 10; SER. NO. 24679; DEPTH OUT 767; DEPTH IN 547; TOTAL FTG. 220; TOTAL HR. RUN 3 1/2; COND. OF BIT DRILLING; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH WATER; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT. — BARAGEL; CARB 300

DRILLER: Brian Jodoin

FOOTAGE 220

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
547	767	D			82	20M	1500	5 1/2	58			

DEVIATION RECORD: DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 00	8 15	1/4	RIG SERVICE + CHECK B.O.Ps
8 15	12 15	3	DRILL OUT PLUG
12 15	1 00	1 3/4	WELD ~~CASING~~ BRACES FROM CASING TO MATTING
1 00	4 00	3	DRILL 7 7/8" HOLE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			
	STANDS D.P.		FT.
8	SINGLES D.P.	251.95	FT.
18	D.C. 6 1/4 I.D. O.D.	595.80	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS C.O. O.D.	1.76	FT.
	BIT OR C.B.	.65	FT.
			FT.
	KELLY DOWN	41.00	FT.
	TOTAL	1330.17	FT.
WT. OF STRING		65,000	LBS.

BIT RECORD: BIT NO. 1; SIZE 7 7/8; MFG. HW; TYPE X1G; NOZZLE NO. 2 1; NOZZLE SIZE 11 10; SER. NO. 24679; DEPTH OUT 1330; DEPTH IN 547; TOTAL FTG. 783; TOTAL HR. RUN 10 1/4; COND. OF BIT 1/8; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 400 / 8 00 / 10 00; WEIGHT 8.6 / 8.6 / 8.7; VISC.-SEC 28; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Dave Fraser

FOOTAGE 563'

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
767	1330	D				30M	1200	5 1/2	58			

DEVIATION RECORD: DEPTH 828 / DEV. 7/8° / DIRECTION / DEPTH 1109 / DEV. 1° / DIRECTION / DEPTH / DEV. / DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	4 15	1/4	RIG SERVICE + CHECK B.OPs
4 15	5 15	1	DRILL 7 7/8" HOLE
5 15	5 30	1/4	SURVEY @ 828 7/8°
5 30	9 00	3 1/2	DRILL 7 7/8" HOLE
9 00	9 15	1/4	SURVEY @ 1109 1°
9 15	12 00	2 3/4	DRILL 7 7/8" HOLE

APPROVED APPROVED

A.A.C.D.C.—A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT

REPORT NO. 31 DATE DEC 7 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LRI ET AL KEELE RIVER	1-81	KEELE RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2 SIZE 4 1/2 — TOOL JOINT 6 1/4 O.D. — TYPE THD. X.O.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lachuk

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	C500	16
2.	EMSCO	C500	16
3.			

	SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET	RKB. TO CSG. HD.	SET AT	REMARKS
LAST CASING	8 5/8		24 & K55	18	547'		547'	300 SK CLASS
TUBING OR LINER	25	BBLS	WATER	AHEAD				CEMENT Plus 3%

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			1/4
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING	2 1/2		
WAITING ON CEMENT	8 1/2	6 1/2	
DRILL STEM TEST			
OTHER		1 1/2	1 3/4
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES — SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD; CUMULATIVE ROTATING HRS.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Neil Bergum	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	2 30	[redacted]	[redacted] RUN CEMENT & PUMP PLUG
		2 1/2	DRILL MOUSE HOLE W/ KELLY
2 30	8 00	5 1/2	W.O.C.
			RIG DOWN @ 930 AM DEC 7 1970

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Brian Lodoway	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	2:30	6 1/2	WAIT ON CEMENT
2:30	4:00	1 1/2	CUT OFF CASEING + WELF BOWL

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Dave Fowler	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4 00	4 15	1/4	RIG SERVICE
4 15	12 00	7 3/4	NIPPLE UP

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

DAILY DRILLING REPORT — REPORT NO. 3 — DATE Dec 6 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	Decalta LRT et al Keel River	1-01	Keel River		West

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. 2, SIZE 4½ — TOOL JOINT 6½ O.D. — TYPE THD. X H

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwin

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	FMSCO	6500	16
2.	FMSCO	6500	16
3.			

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	16		
REAMING			
CONDITIONING MUD & CIRCULATING		1¾	
TRIPS	1½	1	¼
LUBRICATE RIG	¼	¼	¼
DEVIATION SURVEY	¼		
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			5
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			2¼
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES — SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON MI. OR TRIPS SINCE LAST CUT; CUMULATIVE TON MI. OR TRIPS; NO. OF DAYS FROM SPUD; CUMULATIVE ROTATING HRS.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		FT.
	STANDS D.P.		FT.
2	SINGLES D.P.	62.30	FT.
15	D.C. 6½ 2¼ I.D. O.D.	444.93	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
1	RMR. BODY O.D.	2.31	FT.
20	SUBS O.D.	1.96	FT.
	BIT OR C.B.	1.65	FT.
1	Bell Sub	30.	FT.
	KELLY DOWN	24.17	FT.
	TOTAL	545.08	FT.
WT. OF STRING	56M		LBS.

BIT RECORD			
BIT NO.	7	11	12
SIZE		12½	12¼
MFG.		Reed	Reed
TYPE			
NOZZLE NO.			
NOZZLE SIZE			
SER. NO.		917-R	917R
DEPTH OUT			
DEPTH IN		136	54
TOTAL FTG.		409	
TOTAL HR. RUN		15	1½
COND. OF BIT			
REAMER NO.			
REAMER TYPE			

MUD RECORD			
TIME	200	400	600
WEIGHT			
VISC.-SEC	75	90	95
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
Gel	200#		
DRILLER	Red Bergum		

FOOTAGE 164 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. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
341	545	R			100	200	480	7				

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	493	¾							

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12⁰⁰	12¹⁵	¼	Rig Ser
12¹⁵	2⁴⁵	2½	Ream 7¾ Hole to 12¼
2⁴⁵	3⁰⁰	¼	Survey @ 493 ¾
3⁰⁰	6⁷⁰	3½	Drill Ful 12¼ Hole
6³⁰	8⁰⁰	1½	Pull out of Hole

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		FT.
	STANDS D.P.		FT.
2	SINGLES D.P.		FT.
15	D.C. 6½ 2¼ I.D. O.D.	512.94	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS Bell O.D.	30'	FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN	37.00	FT.
	TOTAL	552.00	FT.
WT. OF STRING	56M		LBS.

BIT RECORD			
BIT NO.	RR	1A	
SIZE		12¼	
MFG.		Hw	
TYPE			
NOZZLE NO.			
NOZZLE SIZE			
SER. NO.			
DEPTH OUT		552	
DEPTH IN		545	
TOTAL FTG.		7	
TOTAL HR. RUN		1	
COND. OF BIT			
REAMER NO.			
REAMER TYPE			

MUD RECORD			
TIME	1100	100	300
WEIGHT			
VISC.-SEC	95	130	120
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
Gel	100#		
DRILLER	Bryan Rodewald		

FOOTAGE 7 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. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
545	552	D			100	120	300	7	58			

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4⁰⁰	4¹⁵	¼	Rig Ser
4¹⁵	11¹⁵	7	Run in w/ 12¼ Bit & Clean Bridge at 200 ft
11¹⁵	12¹⁵	1	Break Circ & Drill 12¼ Hole
12¹⁵	2⁴⁵	2½	Dump & T.O.O
2⁴⁵	3⁰⁰	¼	Circ Hole to Run Casing
3⁰⁰	4⁰⁰	1	Hoist to Run Surface Casing

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		FT.
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD			
BIT NO.			
SIZE			
MFG.			
TYPE			
NOZZLE NO.			
NOZZLE SIZE			
SER. NO.			
DEPTH OUT			
DEPTH IN			
TOTAL FTG.			
TOTAL HR. RUN			
COND. OF BIT			
REAMER NO.			
REAMER TYPE			

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS AT TYPE	AMT.		
DRILLER	Dave Leighton		

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4⁰⁰	4¹⁵	¼	Rig Ser
4¹⁵	4³⁰	¼	Finish T.O.O out
[illegible]	[illegible]³⁰	1	Rig up to Run Casing
[illegible]	[illegible]⁰⁰	4½	Run Casing
[illegible]	1³⁰	½	Circ Casing
[illegible]	[illegible]⁰⁰	1½	Run Copper tubing and weld on Shoe

APPROVED APPROVED

A.A.O.C.C.—A.P.I. OFFICIAL DAILY DRILLING REPORT FORM

DAILY DRILLING REPORT — REPORT NO. 2 — DATE DEC 5 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
Western Decalta	Decalta Lreft Al Keel River	1-01	Keel River		NWT

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd. — RIG NO. 9

DRILL PIPE STRING: NO. / SIZE — TOOL JOINT 6 1/4 O.D. — TYPE THD. X H

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Swainson

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	FMSCO	6500	16
2.	FMSCO	6500	16
3.			

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN	4		
DRILLING ACTUAL	6	3 1/4	
REAMING		5 1/4	2 1/4
CONDITIONING MUD & CIRCULATING			
TRIPS		1 3/4	
LUBRICATE RIG	1/4	1/4	1/4
DEVIATION SURVEY	1/2		1/2
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER	1 1/4		
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	6

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES — SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TOW M. OR TRIPS SINCE LAST CUT; CUMULATIVE TOW M. OR TRIPS; NO. OF DAYS FROM SPUD; CUMULATIVE ROTATING HRS.

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
4	D.C. 6 1/4 I.D. O.D.	462.05	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS O.D.	2.97	FT.
1	BIT OR C.B.	1.98	FT.
1	BIT	.65	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	462.00	FT.
	WT. OF STRING	52000	LBS.

BIT RECORD		
BIT NO.	2A	
SIZE	7 7/8	
MFG.	HW	
TYPE	X16	
NOZZLE NO.	3	
NOZZLE SIZE	16	
SER. NO.	21290	
DEPTH OUT		
DEPTH IN	136	
TOTAL FTG.	326	
TOTAL HR. RUN	11	
COND. OF BIT	OB	
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	2AM	4AM	6AM
WEIGHT	35	35	40
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.			
	GEL	1000#	
DRILLER	Ted Bugeau		

FOOTAGE 46 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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.S PAR'EL.P COM'D.C
316	462	D			100	14-16	600	7	58			

DEVIATION RECORD: DEPTH 285 — DEV. 1° — DIRECTION; DEPTH 400 — DEV. 3/4° — DIRECTION; DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	1/4	Rig Svr
12:15	12:30	1/4	Survey @ 245
12:30	3:15	2 1/4	Drill 7 7/8 Hole } 5:45-8:00 2 1/4 Drill pilot Hole
3:15	4:00	3/4	Work on pumps
4:00	4:15	1/4	Drill 7 7/8 Hole
4:15	4:45	1/2	Work on pumps
4:45	5:30	3/4	Drill 7 7/8 Hole pilot
5:30	5:45	1/4	Survey @ 404

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
2	SINGLES D.P.	62.34	FT.
3	D.C. I.D. O.D.	90.68	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
1	RMR. BODY O.D.	3.31	FT.
	SUBS O.D.	1.98	FT.
	BIT OR C.B.	.65	FT.
		3.01	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	201.97	FT.
	WT. OF STRING	34000	LBS.

BIT RECORD			
BIT NO.	2A	1	
SIZE	7 7/8	12 1/4	
MFG.	HW	REED	
TYPE	X16		
NOZZLE NO.			
NOZZLE SIZE			
SER. NO.	21290	91MR	
DEPTH OUT	491	701	
DEPTH IN	136	136	
TOTAL FTG.	355	65	
TOTAL HR. RUN	11 3/4	5 1/4	
COND. OF BIT			
REAMER NO.			
REAMER TYPE			

MUD RECORD			
TIME	9:00	12:00	5:30
WEIGHT	35	43	46
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.			
	Gel	2500#	
DRILLER	Brian Sedzewy		

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	1/4	Rig Svr
8:15	9:00	3/4	Drill 7 7/8 Pilot Hole
9:00	10:45	1 3/4	Trip for Reamer
10:45	4:00	5 3/4	Ream 7 7/8 Hole to 12 1/4

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
12	D.C. 6 1/4 I.D. O.D.	358.38	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1	SUBS O.D.	2.31	FT.
1	BIT OR C.B.	1.98	FT.
		.65	FT.
	KELLY DOWN	41.00	FT.
	TOTAL	381.15	FT.
	WT. OF STRING	46000	LBS.

BIT RECORD		
BIT NO.	Reamer	1
SIZE		12 1/4
MFG.		Reed
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		91MR
DEPTH OUT		
DEPTH IN		136
TOTAL FTG.		245
TOTAL HR. RUN		12 1/4
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME	4:00	6:00	10:00
WEIGHT			
VISC.-SEC	46	35	40
W.L.-C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED: TYPE / AMT. / TYPE / AMT.			
	Gel	2000#	
DRILLER	Joe Hopkins		

FOOTAGE 180 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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.S PAR'EL.P COM'D.C
201	381	R			100	15-20	350	7	56			

DEVIATION RECORD: DEPTH 229 — DEV. 3/4° — DIRECTION; DEPTH 349 — DEV. 3/4° — DIRECTION; DEPTH — DEV. — DIRECTION

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	1/4	Rig Svr
4:15	6:15	2	Ream 7 7/8 Hole to 12 1/4
6:15	6:30	1/4	Survey @ 229 3/4°
6:30	10:00	3 1/2	Ream 7 7/8 Hole to 12 1/4
10:00	10:00	1/4	Survey @ 349 3/4°
10:00	12:00	1 3/4	Ream 7 7/8 Hole to 12 1/4

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. 1 — DATE DEC 4 1976

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	DECALTA LAT ET AL KEEL RIVER	1-01	KEEL RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. 1 SIZE 4½ — TOOL JOINT O.D. — TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lucchese

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.	EMSCO	500	
2.	EMSCO	500	
3.			

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

TIME DISTRIBUTION–HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL	1¼	1	4
REAMING			
CONDITIONING MUD & CIRCULATING		½	2¾
TRIPS	1½	½	
LUBRICATE RIG	¼	½	¼
DEVIATION SURVEY	½		1
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT/WATER		6½	
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS	8	8	8

TIME SUMMARY (OFFICE USE ONLY): DAY WORK; HRS. W/DP; HRS. WO/DP; HRS. STANDBY; TOTAL DAY WORK

WIRE LINE RECORD: REEL NO.; NO. OF LINES — SIZE; FEET SLIPPED; FEET CUT OFF; PRESENT LENGTH; TON M. OR TRIPS SINCE LAST CUT; CUMULATIVE TON M. OR TRIPS; NO. OF DAYS FROM SPUD; CUMULATIVE ROTATING HRS.

MORNING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			FT.
	STANDS D.P.		
	SINGLES D.P.		
3	D.C. I.D. O.D.	90.53	
	D.C. I.D. O.D.		
	STB. BODY O.D.		
	STB. BODY O.D.		
	RMR. BODY O.D.		
1	SUBS C.O. O.D.	1.98	
	BIT OR C.B.		
1	BELL SUB	3.01	
	KELLY DOWN	41.00	
	TOTAL	136.52	
	WT. OF STRING		LBS.

BIT RECORD: BIT NO. 1A; SIZE 12¼; MFG. HW; TYPE; NOZZLE NO. 3, SIZE 16; SER. NO.; DEPTH OUT; DEPTH IN 0; TOTAL FTG. 136; TOTAL HR. RUN 10½; COND. OF BIT OB; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 2:00 4:30 7:00; WEIGHT; VISC.-SEC 30 32 35; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: TYPE G-1 AMT. 1000#; TYPE; AMT.

DRILLER: Bob Berg

FOOTAGE

FROM	TO	DR.D RM.R CORE.C
40	136	96

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	76'	1°		106'	1¼°				

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	12:15	¼	RIG SER.
12:15	4:15	4	DRILL 12¼ HOLE BOULDERS HARD TO DRILL.
4:15	4:30	¼	SURVEY @ 76' DRIG VERY SLOW.
4:30	7:00	2¾	DRILL 12¼" HOLE
7:00	7:30	¼	SURVEY @ 106'
7:30	8:00	½	PULL OUT TO CHECK BIT
	6½		

DAY TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			FT.
	STANDS D.P.		
	SINGLES D.P.		
4	D.C. I.D. O.D.	120.87	
	D.C. I.D. O.D.		
	STB. BODY O.D.		
	STB. BODY O.D.		
	RMR. BODY O.D.		
1	SUBS BIT SUB O.D.	2.97	
	BIT OR C.B.	.65	
1	XO SUB	1.98	
	KELLY DOWN	41.00	
	TOTAL		
	WT. OF STRING	34 000	LBS.

BIT RECORD: BIT NO. 2A; SIZE 7⅞; MFG. HW; TYPE X16; NOZZLE NO. 3, SIZE 16; SER. NO. 21290; DEPTH OUT 167; DEPTH IN 136; TOTAL FTG. 31; TOTAL HR. RUN 1½; COND. OF BIT DRILLING; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 3:00; WEIGHT; VISC.-SEC 28; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Brian Ladouceur

FOOTAGE 31

FROM	TO	DR.D RM.R CORE.C
136	167	DR. 31

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	3								

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:45	2:00	6¾	WAIT ON WATER
2:00	2:30	½	RUN IN WITH 7⅞ BIT
2:30	3:30	1	DRILL 7⅞" HOLE
3:30	4:00	½	MIX MUD
4:00	8:15	¼	RIG SERVICE

EVENING TOUR

DRILLING ASSEMBLY AT END OF TOUR

NO.			FT.
	STANDS D.P.		
	SINGLES D.P.		
9	D.C. I.D. O.D.	268.59	
	D.C. I.D. O.D.		
	STB. BODY O.D.		
	STB. BODY O.D.		
	RMR. BODY O.D.		
	SUBS BIT SUB O.D.	2.97	
	BIT OR C.B.	.65	
1	XO SUB	1.98	
	KELLY DOWN	41.00	
	TOTAL	316.19	
	WT. OF STRING	41,000	LBS.

BIT RECORD: BIT NO. 2A; SIZE 7⅞; MFG. HW; TYPE X16; NOZZLE NO. 3, SIZE 16; SER. NO. 21290; DEPTH OUT; DEPTH IN 136; TOTAL FTG. 180; TOTAL HR. RUN 5; COND. OF BIT O/B; REAMER NO.; REAMER TYPE

MUD RECORD: TIME 4:00 8:00; WEIGHT; VISC.-SEC 30 40; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

MUD & CHEMICALS ADDED: TYPE GEL AMT. 3000; TYPE CAUSTIC AMT. 100

DRILLER: Dave Fryhard

FOOTAGE 149

FROM	TO	DR.D RM.R CORE.C
167	316	

DEVIATION RECORD	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
	167	3¼°		255	m				

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	¼	RIG SERVICE
4:15	7:00	2¾	MIX MUD
7:00	8:00	1	DRILL 7⅞" HOLE
8:00	8:30	½	SURVEY @ 167' 3¼°
8:30	11:00	2½	DRILL 7⅞" HOLE
11:00	11:30	½	SURVEY @ 255' Misrun
11:30	12:00	½	DRILL 7⅞" HOLE

APPROVED — APPROVED

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

DAILY DRILLING REPORT — REPORT NO. — DATE DEC 3/1985

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
WESTERN DECALTA	WESTERN DECALTA KEEL RIVER		KEEL RIVER		N.W.T.

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING: NO. / SIZE — TOOL JOINT O.D. / TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindenbergen

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. W/O/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.

DRILLER: Joel Bergum

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PAR'EL-P COM'D-C
	WEATHER			-30 CLEAR								

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:00	8	WAIT ON WATER & GEL

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.		FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
	SUBS O.D.		FT.
	BIT OR C.B.		FT.
			FT.
	KELLY DOWN		FT.
	TOTAL		FT.
WT. OF STRING			LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
Caustic	200#		
GEL	400#		

DRILLER: Brian Sadowy

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	4:00	~~8~~	
8:00	12:00	4	WAIT ON WATER
12:00	2:30	2 1/2	MIX MUD
2:30	4:00	1 1/2	DRILL RAT HOLE
		8	

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		
	STANDS D.P.		FT.
	SINGLES D.P.		FT.
	D.C. I.D. O.D.	31	FT.
	D.C. I.D. O.D.		FT.
	STB. BODY O.D.		FT.
	STB. BODY O.D.		FT.
	RMR. BODY O.D.		FT.
1/0	SUBS O.D.	1.98	FT.
	BIT OR C.B.		FT.
	BELL Sub	3.01	FT.
	KELLY DOWN	31	FT.
	TOTAL	34	FT.
WT. OF STRING			LBS.

BIT RECORD		
BIT NO.	1A	
SIZE	12 1/4	
MFG.	HW	
TYPE		
NOZZLE NO.	3	
NOZZLE SIZE	16	
SER. NO.		
DEPTH OUT		
DEPTH IN	0	
TOTAL FTG.	40	
TOTAL HR. RUN	2	
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME	4:00	8:00
WEIGHT		
VISC.-SEC	32	34
W.L.-C.C.		
FLTR. CK		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.
GEL	2000		

DRILLER: Dave Tayler

FOOTAGE FROM	TO 40	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 SGL-S PAR'EL-P COM'D-C
0	40											

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
4:00	4:15	1/4	RIG SERVICE
4:15	4:30	1/4	RIG UP TO 12 1/4 BIT
4:30	6:00	1 1/2	DRILL 12 1/4" HOLE
6:00	8:00	2	DIG CELLAR DEEPER & LOWER JET MUD GOING UNDER FILL TO SUMP
8:00	9:30	1 1/2	DRILL 12 1/4" HOLE
9:30	11:30	2	DRILL RAT HOLE
11:30	12:00	1/2	DRILL 12 1/4" HOLE

APPROVED — APPROVED

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

DAILY DRILLING REPORT

REPORT NO.

DATE DEC 2, 1970

OPERATOR: WESTERN DECALTA

LEASE: KEEL RIVER WESTERN DECALTA

WELL NO.

FIELD OR DIST.: KEEL RIVER

COUNTY

STATE: N W T

CONTRACTOR: Jennings International Drilling — A Division of Western Electronics & Engineering Ltd.

RIG NO.: 9

DRILL PIPE STRING: NO. | SIZE

TOOL JOINT: O.D. | TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwikson

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)	
DAY WORK	
HRS. W/DP	
HRS. WO/DP	
HRS. STANDBY	
TOTAL DAY WORK	

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED: TYPE	AMT.	TYPE / AMT.
DRILLER: Ed Bergum		

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PAR'EL-P COM'D-C
				WEATHER -30 CLEAR								

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	12 00	12	RIG UP

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED: TYPE	AMT.	TYPE / AMT.
DRILLER: Brian Lindsay		

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:00	12	START 2 MOTOR + #2 PUMP MOTOR
			PICK UP KELLY
			RIG UP TO DRILL RAT HOLE

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK		
PH		
SD. CONT. %		
PRESSURE GRADIENT		
MUD & CHEMICALS ADDED: TYPE	AMT.	TYPE / AMT.
DRILLER: Wayne Taylor		

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12 00	4 00	4	DIG CELLAR & DITCH TO RAT HOLE
4 00	12 00	8	WAIT ON WATER

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO.

DATE DEC 1 1990

OPERATOR: WESTERN DECALTA

LEASE: KEEL RIVER WESTERN DECALTA

WELL NO.

FIELD OR DIST.: KEEL RIVER

COUNTY

STATE

CONTRACTOR: Jennings International Drilling
A Division of Western Electronics & Engineering Ltd.

RIG NO.: 9

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwikow

DRILL PIPE STRING NO.	SIZE	TOOL JOINT O.D. / TYPE THD.

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER: Ted Boyson

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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL.-S PAR'EL-P COM'D-C
WEATHER		-26		CLEAR								

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	4:00	8	RIG UP FLOOR & FRONT END OF RIG

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK.		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

DRILLER: Brian Sadowy

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	~~RIG~~ UP, STEAM LINES, PUT UP PREFABS

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD		
TIME		
WEIGHT		
VISC.-SEC		
W.L.-C.C.		
FLTR. CK		
PH		
SD. CONT. %		
PRESSURE GRADIENT		

MUD & CHEMICALS ADDED

TYPE	AMT.	TYPE	AMT.

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	RIG UP

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO.

DATE Nov 30/70

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
	Western Decklin Keel River		REEL RIVER		

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	DRILL PIPE STRING SIZE	TOOL JOINT O.D. / TYPE THD.
Jennings International Drilling A Division of Western Electronics & Engineering Ltd.	9			

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwikow

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.

DRILLER: Brian Ladouceur

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:00	12	Rig up

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.

DRILLER: Ted Bergman

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:00	12	Rig UP HALF WAY IN CAMP & Rig up Rig.

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.-SEC			
W.L.-C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED TYPE	AMT.	TYPE	AMT.

DRILLER: David Ingham

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
12:00	2:00	11	Rig UP

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO.

DATE Nov 29, 1970

OPERATOR

LEASE Western Decalta KEEL RIVER

WELL NO.

FIELD OR DIST. KEEL RIVER

COUNTY

STATE

CONTRACTOR
Jennings International Drilling
A Division of Western Electronics & Engineering Ltd.

RIG NO. 9

DRILL PIPE STRING NO. SIZE

TOOL JOINT O.D. TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER Glen Lindsay

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Brian Indovar	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	MOVE CAMP + SET UP

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER J. Bergum	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	LOAD OUT CAMP AT BLACH + HELP SET UP ON LOCATION

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE / AMT. / TYPE / AMT.	
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	S.P.M.	METHOD RUN SGL-S PART'L-P COM'D-C

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

TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED APPROVED

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

DAILY DRILLING REPORT — REPORT NO. — DATE NOV 28, 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
	KEEL RIVER		KEEL RIVER		

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	DRILL PIPE STRING SIZE	TOOL JOINT O.D. / TYPE THD.
Jennings International Drilling A Division of Western Electronics & Engineering Ltd.	9			

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsay

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE	AMT. / TYPE / AMT.
	BIT OR C.B.	FT.	TOTAL HR. RUN		SAWDUST	385 bags
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Brian Sadowsky	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	MOVE RIG TO LEASE PIN DIRRECK + GET IT READY TO RAISE PUT 385 BAGS SAWDUST UNDER PUMPS REMOVE CAMP PREFABS AND GET IT READY TO MOVE

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE	AMT. / TYPE / AMT.
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Ed Burgess	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS.
8:00	12:00	16	MOVE RIG TO LEASE, PUT UP DRAWKS PIN DERRICK. REMOVE CAMP PREFABS SO CAN MOVE CAMP.

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED TYPE	AMT. / TYPE / AMT.
	BIT OR C.B.	FT.	TOTAL HR. RUN			
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER	
WT. OF STRING		LBS.				

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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED — APPROVED

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

DAILY DRILLING REPORT | REPORT NO. | DATE Nov 27 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
	KEEL RIVER		KEEL RIVER		

CONTRACTOR: Jennings International Drilling, A Division of Western Electronics & Engineering Ltd.

RIG NO.: 9

DRILL PIPE STRING: NO. | SIZE | TOOL JOINT O.D. | TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsay

PUMPS

NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)

DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD

REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Brian Hadaway

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 | S.P.M. | PUMP NO. LINER SIZE | 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 | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	DETAILS
8:00	12:00	16	MOVE RIG TO LEASE, PUT SUB TOGETHER + SPOT, PUT DIRRECK TOGETHER

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK.; PH; SD. CONT. %; PRESSURE GRADIENT

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

DRILLER: Col Bergum

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 | S.P.M. | PUMP NO. LINER SIZE | 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 | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	ELAPSED TIME	DETAILS
8:00			LOAD TRUCKS AT BEACH, MOVE TO LEASE, PUT SUB TOGETHER, SPOT SAME, PUT
	12:00	16	DERRICK TOGETHER.

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD: BIT NO.; SIZE; MFG.; TYPE; NOZZLE NO.; NOZZLE SIZE; SER. NO.; DEPTH OUT; DEPTH IN; TOTAL FTG.; TOTAL HR. RUN; COND. OF BIT; REAMER NO.; REAMER TYPE

MUD RECORD: TIME; WEIGHT; VISC.-SEC; W.L.-C.C.; FLTR. CK; PH; SD. CONT. %; PRESSURE GRADIENT

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

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. LINER SIZE | S.P.M. | PUMP NO. LINER SIZE | 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 | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED APPROVED

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

DAILY DRILLING REPORT | REPORT NO. | DATE NOV 26, 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
	KEEL RIVER		KEEL RIVER		

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	DRILL PIPE STRING SIZE	TOOL JOINT O.D. / TYPE THD.
Jennings International Drilling A Division of Western Electronics & Engineering Ltd.	9			

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludwig

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT		SAWDUST 575 bgs.	
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Brian Ludwig	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	12:00	16	MOVE RIG + SPOT MATTING
			PUT 575 BALS SAWDUST UNDER MATTING

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Bill Bergum	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 AM	9 PM	12	LOAD OUT MATTING + SPREADERS + MOVE TO NEW LEASE

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.-SEC	
			TYPE		W.L.-C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED APPROVED

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

DAILY DRILLING REPORT

REPORT NO.

DATE NOV 25, 1970

OPERATOR

LEASE: KEEL RIVER

WELL NO.

FIELD OR DIST.: KEEL RIVER

COUNTY

STATE

CONTRACTOR: Jennings International Drilling
A Division of Western Electronics & Engineering Ltd.

RIG NO.: 9

DRILL PIPE STRING — NO. | SIZE

TOOL JOINT — O.D. | TYPE THD.

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Lindsey

PUMPS			
NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

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

TIME DISTRIBUTION—HOURS	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK — A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.—SEC			
W.L.—C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
DRILLER: Brian Lodoung			

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	7:00	10	MOVE RIG TO LEASE + WORK ON LEASE PAD.

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.—SEC			
W.L.—C.C.			
FLTR. CK.			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
DRILLER: Bel Bergum			

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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8 AM	7 PM	10	MOVE RIG

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR	
	STANDS D.P.	FT.
	SINGLES D.P.	FT.
	D.C. I.D. O.D.	FT.
	D.C. I.D. O.D.	FT.
	STB. BODY O.D.	FT.
	STB. BODY O.D.	FT.
	RMR. BODY O.D.	FT.
	SUBS O.D.	FT.
	BIT OR C.B.	FT.
		FT.
	KELLY DOWN	FT.
	TOTAL	FT.
WT. OF STRING		LBS.

BIT RECORD		
BIT NO.		
SIZE		
MFG.		
TYPE		
NOZZLE NO.		
NOZZLE SIZE		
SER. NO.		
DEPTH OUT		
DEPTH IN		
TOTAL FTG.		
TOTAL HR. RUN		
COND. OF BIT		
REAMER NO.		
REAMER TYPE		

MUD RECORD			
TIME			
WEIGHT			
VISC.—SEC			
W.L.—C.C.			
FLTR. CK			
PH			
SD. CONT. %			
PRESSURE GRADIENT			
MUD & CHEMICALS ADDED			
TYPE	AMT.	TYPE	AMT.
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. LINER SIZE	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED APPROVED

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

DAILY DRILLING REPORT | REPORT NO. | DATE Nov 24, 1970

OPERATOR	LEASE	WELL NO.	FIELD OR DIST.	COUNTY	STATE
	KEEL RIVER				N W T

CONTRACTOR	RIG NO.	DRILL PIPE STRING NO.	DRILL PIPE STRING SIZE	TOOL JOINT O.D. / TYPE THD.
Jennings International Drilling A Division of Western Electronics & Engineering Ltd.	9			

PUMPS NO.	MANUFACTURER	TYPE	STROKE LENGTH
1.			
2.			
3.			

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S TOOL PUSHER: George Ludlum

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

TIME DISTRIBUTION–HOURS

	MORN	DAY	EVE
RIG UP & TEAR DOWN			
DRILLING ACTUAL			
REAMING			
CONDITIONING MUD & CIRCULATING			
TRIPS			
LUBRICATE RIG			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILLING LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
RUNNING CASING & CEMENTING			
WAITING ON CEMENT			
DRILL STEM TEST			
OTHER			
FISHING			
COMPLETION WORK: A. PERFORATING			
B. TUBING TRIPS			
C. SWABBING			
D. TESTING			
E. ADDITIONAL			
TOTALS			

TIME SUMMARY (OFFICE USE ONLY)			
DAY WORK			
HRS. W/DP			
HRS. WO/DP			
HRS. STANDBY			
TOTAL DAY WORK			

WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. OR TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. OR TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

MORNING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.–SEC	
			TYPE		W.L.–C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2:00	10:00	8	WORK ON ROAD

DAY TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.–SEC	
			TYPE		W.L.–C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK.	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER Ed Bergum	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2:00	10:00	8	FIX PICKUP TIRES + WORK ON ROAD

EVENING TOUR

NO.	DRILLING ASSEMBLY AT END OF TOUR		BIT RECORD		MUD RECORD	
	STANDS D.P.	FT.	BIT NO.		TIME	
	SINGLES D.P.	FT.	SIZE		WEIGHT	
	D.C. I.D. O.D.	FT.	MFG.		VISC.–SEC	
			TYPE		W.L.–C.C.	
	D.C. I.D. O.D.	FT.	NOZZLE NO.		FLTR. CK	
			NOZZLE SIZE		PH	
	STB. BODY O.D.	FT.	SER. NO.		SD. CONT. %	
	STB. BODY O.D.	FT.	DEPTH OUT		PRESSURE GRADIENT	
	RMR. BODY O.D.	FT.	DEPTH IN			
	SUBS O.D.	FT.	TOTAL FTG.		MUD & CHEMICALS ADDED	
	BIT OR C.B.	FT.	TOTAL HR. RUN		TYPE / AMT. / TYPE / AMT.	
		FT.	COND. OF BIT			
	KELLY DOWN	FT.	REAMER NO.			
	TOTAL	FT.	REAMER TYPE		DRILLER	
WT. OF STRING		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	S.P.M.	PUMP NO. LINER SIZE	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	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

APPROVED APPROVED

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

PALEO SERVICES LIMITED

GRID 64-30

Decalta LRI et al Keele River I-01

Location: 64° 20'40.05" 125°00'07.34" I-01-64-30-125-00
Lat. 64 34445 Long. 125 00203 300I016430125000
Classification: New field wildcat
Casing: 8 5/8 x 566, C 300 Spud: 3-12-70 Gr. 934
Size of Hole: 12 1/4" 0-549 Completed: 9-1-71 K.B. 951
7 7/8" 549-5600 Status: D and A T.D. 5,600
Samples: 0-5600
Logs: DILL, BHC-S-GR, SNP, FD
Cored Intervals: Nil

MICROPALEONTOLOGY AND PALEOECOLOGY

FOR

DECALTA LRI ET AL. KEELE RIVER, N.W.T.

by

D. M. Loranger, P. Geol.

September 6, 1971

Calgary, Alberta

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MICROPALEONTOLOGY AND PALEOECOLOGY FOR
DECALTA LRI ET AL. KEELE RIVER, N.W.T.

SUMMARY AND CONCLUSIONS

A stratigraphic paleontologic study of the Decalta et al. LRI Keele River well suggested that late Eifelian sediments were present at approximately 4520', and that some questionable Givetian occurred between 3980' and 4300'.

Frasnian sediments were well developed from 3680-3980' and appear to be equivalent to the upper Ireton and middle Hay River section. Jurassic sediments overlie the Paleozoic unconformity, although these cannot at present be assigned to their precise level in the Jurassic. Some evidence suggests a diastem of unknown magnitude at 3580', at which point a marked change in environment from marine to brackish also occurs.

Paleoecologic interpretation of this well, as divided into environmental units, suggested generally poor prospects for source rocks and reservoirs in the lower units (unless they contain some good porosity into which hydrocarbons could have migrated), with the potential increasing towards the top of the section studied. The Frasnian section in this well showed poorly developed forereef and sheltered offreef faunas such as develop on carbonate banks or shelves away from the major reef growth. The upper 120' of the Devonian were the most promising in the well.

The Jurassic section varied from marine to brackish and showed increased source-rock and reservoir potential at 3500'. Cavings suggested a similar or better situation in the overlying beds.

INTRODUCTION

Cuttings from the Decalta et al. Keele River well were sampled and processed in 20' intervals for the section 3500-5600'. These samples were subjected to standard laboratory treatment for microfossils. Since the purpose was to obtain maximum stratigraphic and paleoecologic results, standard-size samples were used where possible, and one qualified technician was assigned the project of examining the disintegrates for microfossil content.

The fossil recovery was excellent in the upper Devonian and reasonably good, although contaminated to an unknown extent by cavings, in the Mesozoic. A combined qualitative-quantitative approach enabled us to pick the approximate top of the Paleozoic and assign provisional stage-names, as well as indicate where diastems or disconformities might occur. The population-analysis technique suggested a number of environmental parameters from which the possible source or reservoir potentials of these parts of the section could be deduced. In the Mesozoic section cavings proved troublesome, but provided some useful hints as to the age of the overlying sediments.

STRATIGRAPHIC PALEONTOLOGY

Microfossil recovery in the lower part of this well below 4300' was very poor and no valid age determinations could be made. A crinoid found at 4520' suggests the presence of the *Gasterocoma* zone. This is an indication of sediments within the upper third of the Bear Rock, if in place. Authors consider this zone to be representative of very late Eifelian time, which suggests that some part of the Paleozoic in this well may belong to that st of Middle Devonian.

Between 3980' and 4300' some altered ostracods were present which range from Givetian into Frasnian. Metamorphism and/or recrystallization, however, had removed too much of the ornamentation for speciation to be adopted. Since these forms are more common in Middle Devonian sediments, this interval is provisionally assigned to Givetian(?).

Frasnian faunas above 3980' can be correlated to the Ireton or Hay River formations and encompass the upper section of the "Lower member" and the lower part of the Escarpment member. This fauna differs from that used by W. Braun, as it represents another type of facies fauna than his late DRF3 and DRF4 forms.

The overlying section to 3500' has been provisionally assigned to the Upper Jurassic(?) on the basis of the regional picture and the general similarity to Callovian fauna in the high Arctic. However, in this well the fauna contains a mixture of Jurassic and Cretaceous material. Pre-Viking Albian as well as Neocomian species were present. The foraminifers recovered have not been recorded from the Lower Cretaceous and are not comparable to Chamney's described section from the basal 110' of the Barremian on Mount Goodenough.* Alaskan wells yield somewhat similar species from the Upper Pleinsbachian or Lower Toarcian. Since the Middle Jurassic is poorly represented in Alaska, the upper limit of these fossil ranges could be revised, both upward from the Lower Jurassic and downward from the Upper Jurassic. There is a dearth, even with re-examination, of diagnostic calcareous forams in this shallow-marine to brackish material. Similar brackish conditions are found throughout much of the Jurassic, ranging from one stage through another where conditions for deposition have been relatively stable for a length of time.

More samples will have to be examined to determine whether this is a stratigraphically condensed section representing a long interval of Jurassic time, a section of Middle and/or Upper Jurassic, or early Jurassic contaminated from above. It is suggested that perhaps two stages are present--one predominantly marine and another brackish. Each of the possibilities will have a pronounced effect on the distribution of prospective horizons.

---

* Barremian Textulariina, Foraminiferida from Lower Cretaceous beds, Mount Goodenough Section, Aklavik Range, District of Mackenzie, by T. Potter Chamney: Geol. Surv. Canada, Bull. 185, 1969, p. 4.

PALEOECOLOGY

In this application of paleoecological techniques to stratigraphic traps in the Mesozoic and to reefs in the Paleozoic, it is important to clarify our approach to the problem by examining the various parameters that apply.

Reef Builders

We know that optimum reef conditions depend on:

a) Firm substrate, for attachment of juvenile stroms.

c) Shallow depths, within the zone of effective photosynthesis, for the associated algae.

c) Adequate nutrition brought in by currents, for the stromatoporoids. (The algae present no problem, as they depend on photosynthesis and soluble nutrients.)

d) Normal salinities. Salinities are a controlling factor since, if they are too low, growth is stunted and a depauperate fauna results; if they are too high, the flora and fauna may be killed by the toxicity.

e) Good circulation. Presumably the ideal current would have been strong enough to sweep mud away from the topographic highs and help disperse larval forms, but not so strong as to remove larvae or juvenile forms while they were becoming established colonies.

f) Clear waters--that is, waters not consistently turbid. Many forms are not able to survive where burrowing organisms or wave activity keep stirring up the muddy bottom. Clays or silts kept in suspension reduce the effective depth of light penetration, thus limiting both the growth of the algae and the food supply of the stroms.

g) Suitable rates of subsidence and deposition in the surrounding sediments, which determine longevity and form (biohermal or biostromal). The supply of sediment also affects the direction of reef growth--if this supply is diminished and the mud zone surrounding the shore shrinks, the reefs may advance shoreward and thus appear transgressive, although no real or appreciable sea-level change has occurred.

Other important factors, such as temperature gradients and their influence on the distribution of organisms, are interrelated and cannot be studied as isolated effects. Temperature is partly a function of depth, major current activity and topography of the shelf floor; in small areas or an isolated well, however, it is not likely to vary a great deal at any given moment in deposition. For this well we have concentrated on the conditions listed above, all of which are essential to our environmental approach and can be investigated by our paleoecological techniques.

Associated Biota

Besides the forms that actually build reefs and are intimately associated with reef facies, there are other organisms equally important for the types of diversified information they suggest. Part of this information is provided by the physical characteristics or morphology of the animals themselves, part by the degree of preservation or alteration of the skeletal material. Together these data can be used to interpret many factors that limit reef distribution, as well as influencing the development of primary porosity.

Subsequent diagenetic processes must be considered in terms of their actual potential for creating hydrocarbon reservoirs. Animals play an important role in the early stages of diagenesis, bacteria alter the hydrogen-ion concentration, which affects the oxidation-reduction potential, so that the organic matter may be eliminated from sediments, the chemical composition of connate waters changed, and new minerals precipitated.

Samples from stagnant silled basins show an abundance of organic matter--presumably from extreme toxic conditions in the waters immediately adjacent to the substrate. Such conditions remain because animal scavengers cannot remove the large quantities of material that accumulate through being washed in by storms or periodic flooding, or even keep up with the forms that are killed by the toxic gases and substances in the water itself. Russian workers have tended to equate productivity (amount of organic material) with source-rock potential.

Other Stratigraphic Traps

Although in the Mesozoic we are not primarily concerned with reefs, many of the same factors apply, with the emphasis being somewhat shifted. Shallow waters along the shoreline, where strong current activity is evident, are a good place for the development of shelf, slope or tidal-sand reservoirs. River systems build stratigraphic traps in old abandoned channels, ox-bow lakes, point-bar sands, and interdistributary and delta-front sands. Strand sands and sea fans also develop at river mouths. In many cases the openings of restricted lagoons and basins have sand barriers or islands and tidal bars developed, as well as the prolific shell banks that are known from the Jurassic to the present. Of lesser importance are the alluvial fans and lacustrine sands that are formed.

The parameters of most use here are water depth, current, salinity and rate of deposition.

Techniques Used

Population-analysis techniques can help determine the depth variations during deposition, the rate and relative energy of sedimentation, the probable current direction and related sorting, and the relative turbidity of the water in which sediments were deposited.

These types of information provide a better understanding of the growth, distribution and migration of the reef-builders. The techniques also help correlate interreef and intrareef facies, and improve our knowledge of initial porosity and permeability resulting from the physical characteristics of the organisms involved. The total abundance and kind of organic material present might also suggest possible source rocks and provide clues as to the type of hydrocarbon deposit that may be anticipated (i.e., wet or dry gas).

Briefly, the techniques consist of examining slabbed cores or (in this case) disintegrated well cuttings, and quantitatively identifying the total organic content by the frequency of occurrence. This includes megafossils, their fragmentary remains, and juvenile forms of brachiopods, gastropods, crinoids, coelenterates, echinoids and bryozoa. Along with these are associated foraminifera, annelids, pteropods, radiolarians, branchiopods, ostracods, chitinozoa and so on. Although most of the forms fall within the animal kingdom, careful attention is paid to any algae, spores or plant fragments that may be present, as these are usually significant. The population is plotted on a log (similar to Plate 2), with the forms expressed as percentages of the total population and plotted in increasing order of depth, so that plants or algae, which indicate shallow depths of a few feet, appear at the left and the articulate brachiopods appear on the right, just before the zooplankton and phytoplankton.

ENVIRONMENT OF DEPOSITION

Since the classification and definition of environments depends on the purposes and aims of the user as well as the area involved, no single classification in terms of depth, salinity or current activity will be a natural or useful one. The guidelines suggested here are concerned with two aspects only--the growth, distribution and development of reef or other stratigraphic traps; and the accumulation and preservation of organic matter. Consequently, some bias has been introduced, and the rarer nondiagnostic and/or long-ranging forms that apparently tolerated a wide range of habitats have been omitted from the graphic logs as nonessential data.

Ancient environments and their organic remains involve considerations of depth range, salinity, water circulation, substrate, Eh, pH, oxygenation and the interaction of plants and animals, as well as a host of subtle physical, chemical and biological factors. The complexity of these variables and the difficulty in measuring them present some problems. Furthermore, the habitats must be measured and described in parameters that can be obtained readily from either core, cuttings or disintegrates.

The major environmental units (terrestrial, brackish, marine, etc.) can be defined without difficulty within certain limits of Eh, pH and total salinity, and each is characterized by definite fauna and flora. Subdivision is necessary within reef complexes for more detailed studies, but for this particular well we have adopted terminology that is in common use.

ENVIRONMENT OF PRESERVATION

The environment of preservation is concerned primarily with the total amount of organic material or productivity that is indicated by skeletal material and particulate organic matter, and the factors that contribute to its preservation and/or diagenetic alteration. The hydrocarbons in petroleum appear to have originated from different sources and by different mechanisms, with the lighter ones being formed from the decomposition of the heavier organic material, and the heavier ones from synthesis by living organisms. As a result of either early lithification or primary diagenesis within the carbonates, the hydrocarbons tend to be retained unless migration paths are developed through fractures and solution channels. Many of the Russian workers have worked on the theory that oil is a product partly of the living organisms within the sediments and partly of the reduction of nonhydrocarbon organic matter. They relate abundance or productivity directly to hydrocarbon occurrence.

The preservation of this organic matter depends to some degree on the environment of deposition and the various parameters involved. The considerations here are:

1) whether the organic matter has been removed by solution and/or oxidation;

2) whether, if present, it has achieved the necessary degree of maturation.

DECALTA LRI ET AL. KEELE RIVER, N.W.T.

A paleoecologic interpretation for this well, based on the parameters shown on Plate 2, cannot be made for the section below 4300' to total depth because of the lack of recognizable fossil material. The badly preserved bryozoans found at 5440' and 5540' suggest that good faunas had been present at the time of deposition but had since been altered and/or removed during subsequent recrystallization and deposition.

Above this section, from 3900-4300', have been found a few ostracods of possible Givetian age. Their numbers are sparse and they are poorly preserved. The shell material appears to have suffered from recrystallization as well as other alteration due to metamorphism. The salinity appears to have been normal or slightly above normal, and the waters were probably muddy much of the time.

The Frasnian section, 3800-3980', was deposited slowly in very shallow shoal-like conditions. The frequent reworked fossils and barren zones suggest something above or close to wave base much of the time. There is little evidence of current activity such as is found in the well-developed forereef areas at Leduc, Rainbow, etc. The waters were probably turbid and much carbonate mud was in suspension--factors not conducive to the growth of reefs or their associated biota. Salinities were within the normal range but general productivity was low. Some variation in the amount of metamorphism is suggested. This does not appear to have been a good environment for reef growth or development, or for the production and accumulation of organisms that could provide the necessary hydrocarbons for good source beds.

Samples from the Frasnian, 3680-3800', suggest relatively clear, shallow forereef and sheltered offreef conditions. Rates of deposition were near normal, and there is evidence of current activity before the major unconformity at the top of the Paleozoic in this well. Salinities were normal and productivity apparently low--although many of the forms may have been removed by oxidation. This part of the stratigraphic section does not appear to be in or near a zone of active reef growth, although it is somewhat better than the preceding section. The Frasnian does contain forereef and sheltered offreef forms, but these are poorly developed, like the ones found in wells drilled in carbonate-shelf areas removed from the major reef trends. Smallish reefs may survive for limited periods under such conditions, but cannot be considered prospective.

The lower part of the Jurassic in this well from 3600-3680' appears to be separated from the overlying section by a small diastem. Water depths at the time of deposition are considered to have been shallow, and the rate of sedimentation normal for this type of lithology. The fossil forms indicate little appreciable current activity, although well-developed 'turbidity' faunas are present: these may indicate that wave action was fairly strong and that the waters were in a consistently turbid or agitated

condition. Salinity appears to have been well within the normal range. The productivity of identifiable forms appears to have been low but the total organic matter was high because of the carbonaceous material that accumulated during the early phases of diagenesis.

Sand accumulations occurring in this part of the section should be well-sorted offshore bars or barriers. The total fauna suggests an adjacent area of moderate to low relief.

The overlying 3500-3600' samples show a change from marine to well-developed brackish faunules of possible Middle Jurassic age. The waters were shallow, and adjacent to a shoreline of moderate relief where there appears to have been little current activity but strong wave action. Salinities were below normal, possibly because of a nearby river. The total organic content is relatively high and exhibits an advanced degree of maturation--about the level of material from the Norman Wells section. The extent of preservation of organic material in this part of the section strongly indicates reducing conditions. Pre-Viking cavings in this hole suggest similar conditions may have extended well up into the Albian. This appears to be a promising part of the section, offering potential for the development of both source and reservoir beds at this stratigraphic level in nearby areas.

EXPLANATION FOR PALEOECOLOGIC LOG - PLATE 2

AGE

Where possible, the ages have been related to the major European stages.

ENVIRONMENT OF DEPOSITION

Fossil Analysis

Abundances of growth-form 'genera' expressed as percentages of total population. Arranged in approximate order of depth with benthonics on left, plankton and swimmers on right.* Scaled as 25 per cent intervals and marked in tenths vertically to match mechanical-log scale.

0 25 50 75 100

Water Depth

Approximate water depths shown in meters and marked in 10s for compactness.

0 10 20 30 40 M

Any portion of the curve falling within the first interval (=10m or less) would indicate high-energy conditions of erosion, or still-stand where erosion and deposition are in equilibrium.

Rate of Deposition

Sediments and their enclosed fossils are considered to be deposited at rates of slow (S), normal for the type of sediment involved (N) or rapid (R). The Rate of Deposition serves frequently as a check on the Water Depth, although all sediments are not deposited *in situ*--mud flows or turbidity flows, for example.

S N R

* Zooplankton such as *Tentaculites* are useful current indicators; phytoplankton is considered to be the main source of organic matter in marine basins.

Current

This is a ratio between the numbers of planktonics and benthonics in the population. Swimming forms are not included, as they may occur in association with either group and are not indicative of current activity.

A = all plankton A
B = all benthon B P/B

Turbidity or the amount of sediment in suspension affects the depth of light penetration, influencing plant and algal growth as well as the living habits of reef-building coelenterates. Bryozoa and calcareous alga would flourish under clear conditions (C) and be absent under turbid ones (T).

C T

Salinity is expressed relatively as low (L), normal (N) or high (H) in terms of reef-building requirements. The bivalves are particularly useful, as they obligingly develop spines, ribs and other types of ornamentation in response to concentration of salts or other materials in solution. The reef-builders tolerate a middle range of salinities.

ENVIRONMENT OF PRESERVATION

Richness

The amount of organic matter identified per gram of sample. Each division represents 25. Values of 100 or more are common immediately above or below zones of high potential.

Preservation

Two curves may be shown in this column, one to indicate solution and/or leaching and the other to show the amount of metamorphism indicated in these samples. The latter is scaled from 1 to 5, 5 representing brecciated or faulted zones and/or mountain-building. Yellow is used to indicate oxidizing environments; brown to indicate reducing.

Habitat

Terrestrial, brackish and marine habitats are indicated and, in the Paleozoic areas where reefs are in proximity, forereef, backreef, etc.

LEGEND

CARBONACEOUS MATERIAL		PELECYPODS	
ALGA		CRINOIDS	
FORAMINIFERA		BRACHIOPODS	
OSTRACODA		RADIOLARIA	
ECHINOID		TENTACULITES	
OPHURIAN		CARTILAGE	
GASTROPOD		SPINES INDETERMINATE	
REDUCING		OXIDIZING	

Plate 2-2

PALEOECOLOGIC LOG

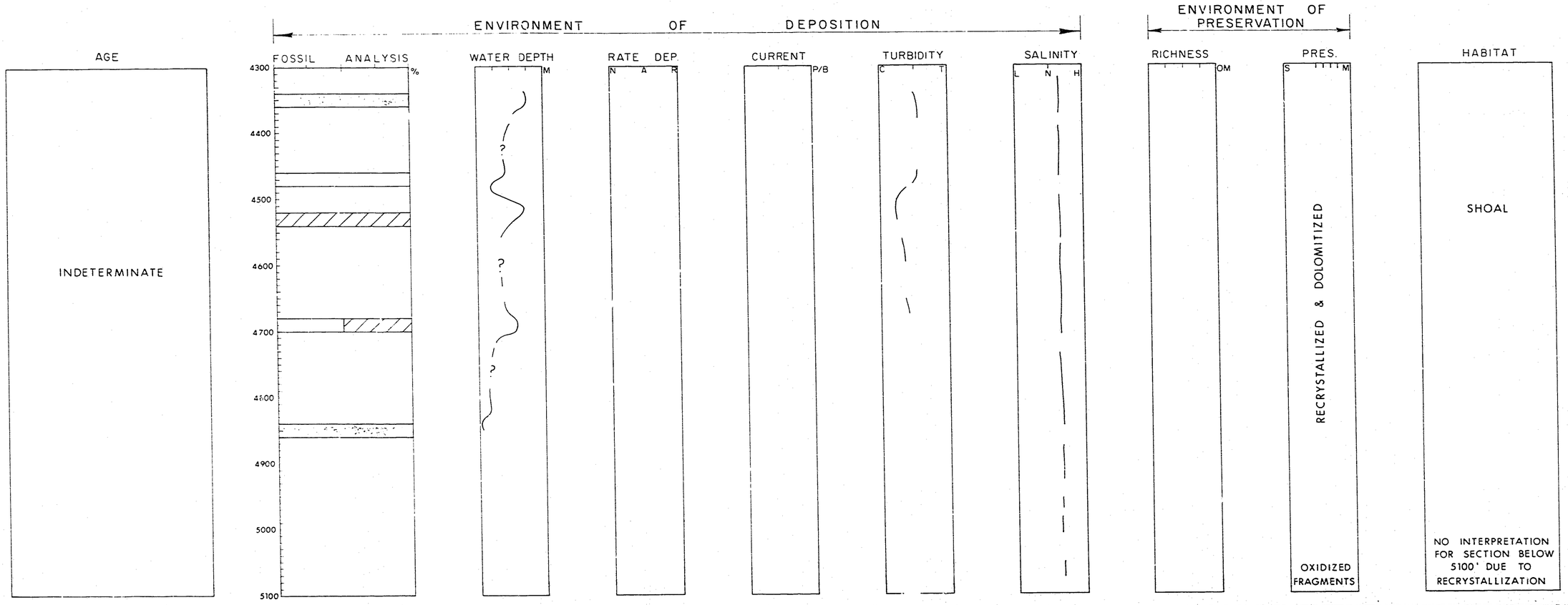
WELL DECALTA ET AL KEELE RIVER

BASED ON CUTTINGS 3500' - 5600'

LOCATION _____ K.B. _____

CORE _____

PREPARED FOR CDN. DELHI OIL
By
D.M. LORANGER P.Geol.
SEPT. 1971



A P P E N D I X

Microfossil Log

Feet	
3500*	*Haplophragmoides* sp. *Reophax* cf. *metensis* Franke *Bathysiphon anomalocoelia* Tappan *Ammobaculites* sp. *Gaudryina* sp. *Involutina silicea* Terquem
3520	*Haplophragmoides* sp. *Reophax* cf. *metensis* Franke *Ammobaculites* sp. *Involutina silicea* Terquem *I.* sp. *Saccamina* sp. *Miliammina* sp.?
3540	*Haplophragmoides* sp. *Reophax* cf. *metensis* Franke *Bathysiphon anomalocoelia* Tappan *Ammobaculites* sp. *Gaudryina* sp. *Involutina silicea* Terquem *Trochamminoides* sp. *Gaudryina* cf. *kelleri* Tappan *I.* sp.
3560	*Haplophragmoides* sp. *Bathysiphon anomalocoelia* Tappan *H.* cf. *gigas* Cushman (cavings)
3580	*Haplophragmoides* sp. *Bathysiphon anomalocoelia* Tappan *Involutina silicea* Fragment Radiolarian Cartilage
3600	*Haplophragmoides* sp. *Bathysiphon anomalocoelia* Tappan *Involutina* sp. *I. goodenoughensis* Chamney (cavings) Cartilage

* Note: Undetermined amount of carbonaceous material in 3500-3680'.

Feet	
3620	*Haplophragmoides* spp. *Bathysiphon anomalocoelia* Tappan *Involutina silicea* Terquem *Saccamina* sp. *Bathysiphon* sp.
3640	*Haplophragmoides* sp. *Miliammina* sp. *Bathysiphon* sp. Plant spore
3660	*Haplophragmoides* sp. *Involutina silicea?* *Lenticulina wisniowskii* (Myatliuk) *Reophax* sp. Cartilage
3680	*Haplophragmoides* sp. *Cavellina?* sp. *Plagionephrodes* sp. *Tentaculites* sp. *Kloedenia* spp. *Youngiella elongata* Loranger *Cytherellina?* sp. Charophyta Spines indet.
3700	Aragonite
3740	*Kloedenia* spp. *Acratia* spp.? *Cavellina* sp. Charophyta *Eucandona?* sp Crinoid Ophurian
3760	*Kloedenia* spp. *Youngiella elongata* Loranger Charophyta *Trapazella* sp. *Bathysiphon* sp. (cavings) *Bollia* sp. *Acratia* spp. *Geisina* sp. *Gravia* sp. *Bairdia* sp. *Eukloedenella* sp. *Hypotetragona media* Loranger

Feet	
3780	*Cavellina* sp. Charophyta *Acratia* sp. *A. evianensis* Yegorov *A. gassanovae* Yegorov *Gravia* sp. *Healdianella?* sp.
3800	Barren
3820	*Kloedenia* sp. *Gravia* sp. *Cavellina* sp. *Bythocypris* sp. *Healdianella?* sp. Spines indet.
3840	Tentaculites *Kloedenia* sp. *Acratia* sp. *Mauryella sola* Loranger *Healdianella?* sp. *Amphizona? pseudocarinata* Smith Gastropod Cartilage *Gravia* sp.
3860	*Kloedenia* sp. *Healdia* sp. Crinoid Spines indet. *Healdia* sp. *Youngiella devonica* Loranger *Hypotetragona media* Loranger *Gravia* sp.
3880	*Cavellina* sp. *Acratia* sp. *Barychelina* sp. *Mauryella sola* Loranger *Impostor?* sp.
3900	Tentaculites *Kloedenia* sp. *Youngiella devonica* Loranger *Amphizona? pseudocarinata* Smith *Mauryella sola?* Loranger *Acratia* sp. *Hypotetragona media* Loranger Brachiopod fragment

Feet	
3920	Tentaculites *Kloedenia* sp. *Youngiella* sp. *Amphizona? pseudocarinata* Smith *Mauryella sola* Loranger *Cavellina?* sp. *Hypotetragona media* Loranger Echinoid Cartilage
3940	*Kloedenia* sp. Aragonite
3960	*Bythocypris* sp.? *Acratia* sp. *Cavellina* sp.?
4000	*Acratia* sp.
4020	*Healdianella* sp.
4040	*Haplophragmoides* sp. (cavings) Ostracod indet.
4060	Barren
4080	*Kloedenia* sp. Spines indet.
4100	Barren
4120	Ostracod fragments
4140	Barren
4160	*Kloedenia* sp.
4180	Barren
4200	Barren
4220	Ostracod fragment
4240	Barren
4260	Ostracod mould
4280-4320	Barren
4340	Brachiopod (recrys)
4360-4500	Barren

Feet	
4520	Crinoid
4540	Barren
4560	Crinoid
4580-4640	Barren
4640	Ostracod?
4660	Barren
4680	*Kloedenia* sp. Crinoid
4700-4840	Barren
4840	Ostracod? Carbonaceous impressions
4860-5100	Barren
5100	Oxidized fragments
5120-5440	Barren
5440	Bryozoa?
5460-5540	Barren
5540	Bryozoa?
5560-5600	Barren