

C D R Wood Buffalo

C-03

Drilling Authority No. 368
Date Issued March 19, 1969

WELL NAME CDR Wood Buffalo C-03

FIELD
LOCATION: Unit C Area: 03 Grid 60-40-114-30
Latitude 60-32-00.04 Longitude 114-30-59.91
From Established Reference Marker

U.W.I.-R. 60.53334 --- 114.51664
U.W.I. 3000036040114300

Rig Release Date:
Status
Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
March 19, 1969	Application for a Drilling Authority. Well Completion Data. Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well. Well History Supplement.
Nov 26/69	Well Completion Data. Work-over Report No.
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells — Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells — Vitter's Method.
	M.P.R. — Oil — Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report Logs. Large scale Small scale



Drilling Authority No. 363
Date Issued March 19, 1969

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

~~EXPLORATION AND PRODUCTION~~
OIL AND MINERAL DIVISION
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 CDR Wood Buffalo C-03s

Permit No. 4734

Lease No.

Central-Del Rio Oils Limited
(Permitter, Licensee, Lessee)

Exploratory Licence No.

1115 & 1288

Central-Del Rio Oils Limited
(Operator)

Exploratory Licence No.

1115 & 1288

Location: Unit

Section

Grid

Latitude 60° 32' 00.04"

Longitude 114° 30' 59.91"

From Established Reference Marker BM 122

Universal Well Location Reference Lat. 60.53334° N., Long. 114.51664° W.

	DATE	DEPTH	Pool(s)	Wild Cat
			Interval(s) open to production	Dry & Abandon
Spudded	May 23/69			
Suspended				
Resumed Operations				
Finished Drilling	Jun 14/69	1142'		
Deepened			Elevation: Gr.	836 K.B. n/a
Complete (gas/oil)			Rig No.	1
Abandoned	Jun 15/69	1142	Drilling Contractor	Apollo Exploration Ltd.
Rig released	Jun 15/69		Contractor's Business Licence No.	

CASING RECORD

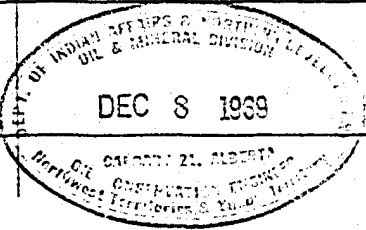
Casing Size (inches)	Grade	Weight	Amount	Set at -	Sacks of Cemen. and Additives
1. 2 1/2"	AY	2.9	212	212	6 sacks of cement
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
Coring begins in Slave Point			Cored from surface to TD See section II of report					
Fort Vermillion	242	+591						
Watt Mountain	301	+535						
Sulphur Point	318	+518						
Muskeg	404	+432						
Keg River	861	- 25						
Platform	1074	-238	LOG RECORD					

CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Flaring, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
June 15/69	TD	800'	10 sacks of cement								
June 15/69	212'	Surface	5 sacks of cement Plate welded on and identification marker erected.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.R.H.P.	F.S.I.R.H.P.	L.F.R.H.P.	F.F.R.H.P.	I.H.P.	F.H.P.	REMARKS



ANALYSIS

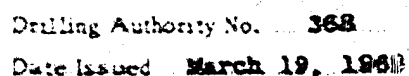
Lab. No.	Sample	From	To	Source	Remarks

PRESENT STATUS OF WELL

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

Company **Central-Deo Rio Oils Limited**
 Signed by **W. J. Scott**
 Title **Superintendent of Operations**
 Date **November 26, 1969**

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



~~RESOURCE MANAGEMENT DIVISION~~
OIL AND MINERAL DIVISION
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: **CNR Wood Buffalo C-03**

Permit No. **4734** Lease No. _____

Central-Del Rio Oils Limited Exploratory Licence No. **1115 & 1288**
(Permitter, Licensee, Lessee)

Central-Del Rio Oils Limited Exploratory Licence No. **1115 & 1288**
(Operator)

Location: Unit **C** Section **03** Grid **60°40'; 114°30'**
Latitude **60°32' 00.04"** Longitude **114°30' 59.91"**
From Established Reference Marker **SM 122**
Universal Well Location Reference **Lat. 60.53334°N, Long. 114.51664°W**

	DATE	DEPTH
Spudded	May 14/69	
Suspended		
Resumed Operations		
Finished Drilling		
Deepened		
Complete (gas/oil)		
Abandoned	May 22/69	150'
Rig released	May 22/69	

Pool(s) **Wild Cat**
Interval(s) open to production **Dry and abandon.**
Elevation: Gr. **836** K.B. **n/a**
Rig No. **1**
Drilling Contractor **Appollo Exploration Ltd.**
Contractor's Business Licence No. _____

	Casing Size (inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1.	2 1/2	Ax	2.9	150	150	
2.						
3.						
4.						
5.						
6.						

[illegible]

Run No.	Type of Log	From	To
	No Logs Run		

Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
			Junked								

[illegible]

Lab. No.	Sample	From	To	Source	Remarks	Oil (Interval)	Gas (Interval)	Dry Abandoned	Susp.
								X	

Company **Central-Dei Rio Oile Limited**

Signed by *[Signature]* **J. H. Gibson**

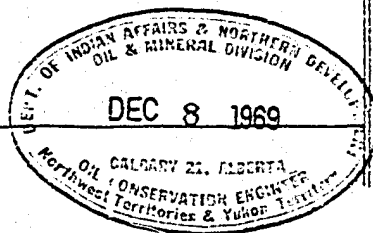
Title **Staff Engineer**

Date **November 2, 1969**

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

Company Central-DeL Rio Oils Limited
Signed by *W. H. Gibson* J. H. Gibson
Title Staff Engineer
Date November 2, 1969

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





File No.
Drilling Authority No. 368

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

~~Resource Management Division~~

~~Oil and Gas 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 ~~2-1347 12th Avenue S.W., Calgary, Alta.~~ **CEN 7-46 Buffalo C-13**
Location: Unit **C** Section **03** Grid **60°40'; 114°30'**
Latitude **60° 32' 00.04"** Longitude **114° 30' 58.91"**
From Established Reference Marker **BM 123**
Universal Well Location Reference **Lat. 60.53334° N., Long. 114.51664° W.**
Permit No. **4734** Lease No.

Central-Del Rio Oils Limited

Date of commencement of proposed program **May 22, 1969**

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at
Gas at
Water at
Total Depth **150** Date of last operations **May 22, 1969**
Present condition of well **Dry H-1e**

CASING RECORD

Casing Size O.D. inches	Weight	Amount	Set At—	Seals of Cement and Additives	Amount Pulled
1. 2 1/2	2.9	160	150		None
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
		Hole Junked		

The following logs have been run **None**
Other operations proposed **None**

Operations to be carried out by **Apollo Explorations Ltd.** Contractor Licence No.
Address **2-1347 12th Avenue S.W., Calgary, Alta.** Address
Responsible Agent in field **D. McTavish**
Dated at **Calgary, Alberta**, this **22** Day of **March**, 19 **69**
Signed by **(W. J. Scott)** Company **Central-Del Rio Oils Limited**
Title **Operations Superintendent** Operator's Exploratory Licence No. **1115 & 1288**

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

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

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

Dated **5th March**, 19 **70**

B. J. J. Jones
Oil Conservation Engineer

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



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

~~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 CDR Wood Buffalo C-03a
Location: Unit 6 Section 03 Grid 60°40' 114°30'
Latitude 60° 32' 00.04" Longitude 114° 30' 38.81"
From Established Reference Marker BM 122
Universal Well Location Reference Lat. 60.53334° N., Long. 114.51064° W.
Permit No. 4734 Lease No.

Central-Del Rio Oils Limited
(Permittee, Lessee, Licensee)

Date of commencement of proposed program June 15, 1969

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at
Gas at
Water at
Total Depth 1143 Date of last operations June 15, 1969
Present condition of well Dry Hole

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. 2 1/2"	2.9	212	212	6 sacks of cement	2000
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

No.	Plug	Geological Formation	Number of Sacks of Cement	Remarks
	Position			
1	TD to 800'	Keg River Platform	10	
		& Keg River		
2	212' to surface	Slave Point	5	

The following logs have been run None
Other operations proposed.

Operations to be carried out by Apollo Explorations Ltd. Contractor Licence No.
Address 2 - 1347 12th Avenue S.W., Calgary, Alta. Address
Responsible Agent in field D. McTavish
Dated at Calgary, Alberta, this 14th Day of June 19 69
Signed by W.J. Scott Company Central-Del Rio Oils Limited
Title Operations Superintendent Operator's Exploratory Licence No. 1115 & 1238

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

(For RESOURCE MANAGEMENT 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 12th June 1969.

Dated 5th March, 19 70 Oil Conservation Engineer

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

Drilling Authority No. **X68**

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

~~SAFETY OF MINERAL RESOURCES~~

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 **COR Wood Buffalo C-03**
 Location: Unit **C** Section **03** Grid **60°40' 114°30'**
 Latitude **00 32' 00.04"** Longitude **114 30' 50.81"**
 From Established Reference Marker **BM122**
 Universal Well Location Reference **Lat. 60.53394° N., Long. 114.51664° W.**
 Elevation: Ground **836 ft.** K.B. **feet above sea-level.**
 Well is expected to produce from **Keg River** formation at a depth
 of about **706** feet. Expected total final depth **1200**
 Area assigned to well
 (For Oil Conservation Engineer's use only)

Permit No. **4734** Lease No. **33308** Acreage **33308**
 Permittee, licensee, or lessee **Central-Del Rio Oils Limited**
 Exploratory Licence No. **1115**
 Surface owned by Crown or **Crown**
 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	Barrels of Cement
1. 2½	2.9	J-55	New	120	
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment **adequately weighted drilling fluid and blowout preventers.**

Well will be drilled with Rotary Rig No. **1** by **Apollo Exploration Ltd.**
 (Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No. **Applied For**
D. McFavish **W. J. Scott**
 At well **Weyburn, Saskatchewan** At registered office **736 - 8th Avenue S.W., Calgary 2, Alberta.**
 Address **Weyburn, Saskatchewan** Address **736 - 8th Avenue S.W., Calgary 2, Alberta.**
 It is understood that if changes become necessary, notice of the change of plan will be submitted.
 Dated at **Calgary, Alberta** this **18th** day of **March** 19 **69**
 Signed by **J. A. Gibson** Company **Central-Del Rio Oils Limited**
 Title **Staff Engineer** Operator's Licence No. **1115**
 (For Resource Management Division use only)

APPROVED

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

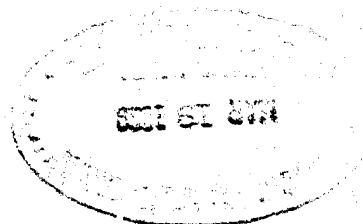
1. The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.
2. During well drilling and testing operations, every effort shall be made to ensure that

Dated **19th March** **69** **B. J. Smith** (over)
 Oil Conservation Engineer

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

IAND 52-90-1 (3-67)

UNIQUE WELL IDENTIFIER - 300C036040114300



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.

3. Surface casing shall be cemented at least 75 feet into a competent formation.
4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.

B. S. Thomas

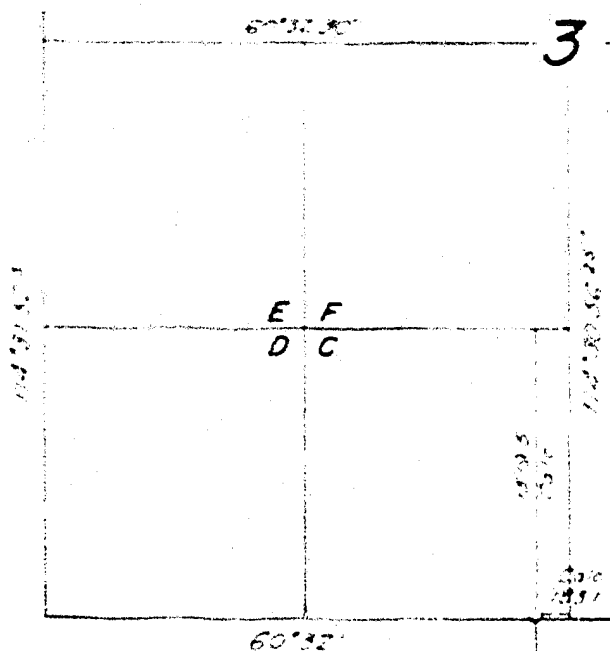
Oil Conservation Engineer

FINAL PLAN

CDR WOOD BUFFALO

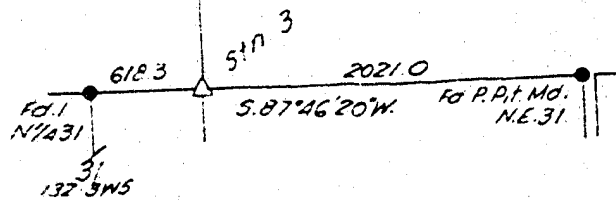
C3, 60-40, 114-30

Latitude 60°32'00.00" Longitude 114°30'59.91"
NORTHWEST TERRITORIES



COORDINATE TABLE				
U.T.M. Values		Scale Factor 0.9999	Ref Mer 117°00"	
Station	Bearing	Distance	North	East
NE 31	5.87°46'20"W	2021.0	22,026,851.5	449,395.4
3	N 02°13'20"W	4700.0	22,026,772.9	447,375.9
Well Loc.			22,031,469.4	447,193.6

Scale: 1000' to 1"



Survey completed 12th day of March, 1969.
Certified correct

NOTE:
1. Distances are in feet and decimals.

[Signature]
Alberta Land Surveyor

CENTRAL-DEL RIO OILS LIMITED

[Signature]

[Signature]

ELEV: 836 Gr.
DATUM: B.M. #122



MIDWEST SURVEYS CO. LTD.

C 178-69 b

WELL HISTORY RECORD

on the

DRILLING & ABANDONMENT

of

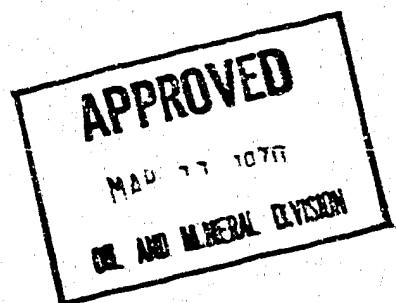
CDR Wood Buffalo C-03 and C-03A

Copy #3

26-11-4-11

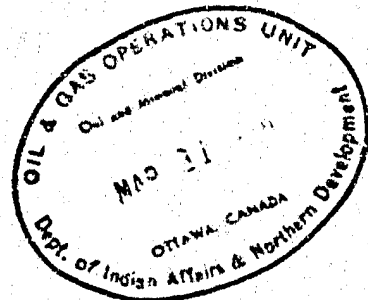
26-11-4-11

26-11-4-18.



WELL HISTORY RECORD

on the



DRILLING & ABANDONMENT

of

CDR Wood Buffalo C-03 and C-03A

Location: Latitude 60° 32' 0.04"
Longitude 114° 30' 39.91"

Northwest Territories

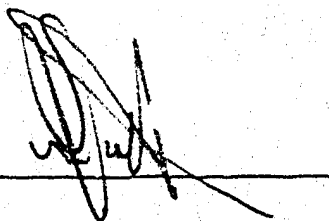
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CDR Wood Buffalo C-03

I N D E X

Section I - Summary of Well Data	1 - 2, 3
Section III - Engineering Summary	2
Section IV - Completion Record	2
Section II - Geological Summary	4 - 13

Approved By: _____

A handwritten signature in black ink, appearing to be 'W. Wood', is written over a horizontal line that serves as the signature line for the 'Approved By:' field.

CDR Wood Buffalo C-03

Section I - Summary of Well Data

- a) Well name and number - CDR Wood Buffalo C-03
- b) Permittee - Central-Del Rio Oils Limited
- c) Name of operator - Central-Del Rio Oils Limited
Unit C, Sec. 03, Grid 60°40'; 114°30' UWI: 308C036040114300
- d) Location - Lat. 60.53334° N., Long. 114.51664° W.
- e) Co-ordinates - Lat. 60° 32' 00.04", Long. 114° 30' 59.91"
- f) Permit No. 4734
- g) Drilling Contractor - Appollo Explorations Limited - Rig No. 1
Rotary.
- h) Drilling authority - 368 - March 19, 1969
- i) Classification - Wild Cat
- j) Elevation - 836
All measurements are taken from ground level.
- k) Spudded - May 14, 1969
- l) Completed drilling - May 22, 1969
- m) Total depth - 150'
- n) Well status - Junked hole abandon & moved rig 2 feet south.
- o) Rig release - May 22, 1969
- p) Hole size - 3½"
- q) Casing - 143' of 2 7/8" BX casing & 150' of 2¼" AX casing. BX casing broke off 69' from surface. Fished all day. Lost in hole 12' of NX casing 1 NX casing shoe. 75' of BX casing & BX casing shoe.

CDR Wood Buffalo C-03a

Section I - Summary of Well Data

- a) Well Name and Number - CDR Wood Buffalo C-03A
- b) Permittee - Central-Del Rio Oils Limited
- c) Name of Operator - Central-Del Rio Oils Limited
- d) Location - Lat. 60.53334° N., Long. 114.51664° W. UTM: 3020036040114300
- e) Co-ordinates - Lat. 60° 32' 00.04" N., Long. 114° 30' 59.91" W. Unit C, Sec. 03, Grid 60°40'; 114°30'
- f) Permit - No. 4734
- g) Drilling Contractor - Apollo Exploration Ltd., Rig No. 1 Rotary
- h) Drilling Authority - 368, March 19, 1969
- i) Classification - Wildcat
- j) Elevation - 836

All measurements are taken from ground level.

- k) Spudded - May 23, 1969
- l) Completed Drilling - June 14, 1969
- m) Total Depth - 1142'
- n) Well Status - Dry and Abandoned
- o) Rig Release - June 15, 1969
- p) Hole Size - 1 3/4" 212-TD; 2 7/8" Surface to 212'.
- q) Casing - 212' of 2 1/4" AX casing with 6 sacks of cement.
2 7/8" BX casing from 149' to 123' left in hole.
Behind surface pipe.

Section III - Engineering Summary

- a) Report of Drill Stem Tests - None taken
- b) Casing Record - 26' of BX 2 7/8" O.D. 4.7#/ft. from 149' to 123'
212' of AX 2 1/4" O.D. 2.9#/ft. from 212' to surface
Cemented with 6 sacks of cement
- c) Bit Record - None kept according to mining custom
- d) Mud Report - Water only used
- d) Deviation Record - None taken
- f) Abandonment Plugs - 10 sacks of cement from T.D. to 800'
5 sacks of cement from 212' to surface

Section VI - Completion Record

- a) June 15, 1969 ran Plug No. 1, T.D. to 800' with 10 sacks of cement
June 15, 1969 ran Plug No. 2, 212' to surface with 5 sacks of cement

Spudded May 14, 1969

May 15 20' drilling surface hole with new BX casing and shoe.
 May 16 80'
 May 17 no shift. Men in Hay River.
 May 18 same.
 May 19 8:00 a.m. 13''. Broke BX casing off at 88'
 May 19 Fishing BX casing. Man hurt, no drilling.
 May 20 Drilling casing.
 May 21 8:00 a.m. BX to bed rock at 141'
 May 22 BX casing to 143', AX casing to 150'. Broke BX casing
 69' from surface. Fished all day. Lost in hole 12'
 of NX casing & NX casing shoe. 75' of BX casing and
 BX casing shoe.
 May 23 Moved hole 2' south and started again with BX casing
 and shoe.
 May 24 8:00 a.m. 58'
 May 25 8:00 a.m. 109'
 May 26 25 & 26 Equipment broke down.
 May 27 8:00 a.m. 142' Cored AX from 147'
 May 28 212'. BX casing broke off at 123'. Could not fish.
 26' BX casing left in hole.
 Cemented AX surface casing with 6 bags of cement at
 8:30 p.m.
 May 29 Waiting on cement, installed B.O.P. and Flare line.
 May 30 Drilled out at 1:30 p.m. Hole caved at 213.6'.
 Cemented with quick drying cement 130' to 256'.
 8 bags.
 May 31 8:00 a.m. 256'. Sand or shale from 226' - 236' and
 from 238.2 to 242'.
 June 1 Waiting on cement to set.
 June 2 8:00 a.m. 200' in cement. Cement hadn't set between
 213' and 236'. Ran 5 bags of quick drying cement under
 pressure. Waited 12 hours.
 June 3 190'
 June 4 292'
 June 5 384'
 June 6 506'
 June 7 595'
 June 8 645'
 June 9 743'
 June 10 824'
 June 11 907'
 June 12 976'
 June 13 1040'
 June 14 1074'
 June 14 10:30 p.m. 1142'. 2 runs stack 60' from bottom.
 Concerned about losing drill string. Shut rig in.
 June 15 Phone Calgary for permission to abandon.
 June 15 Ran 10 sacks of cement from 800 to TD. Ran 5 sacks
 cement from 212' to surface. Rig released.

CDR WOOD BUFFALO C-03A

<u>GEOLOGICAL TOPS</u>	<u>DEPTH</u>	<u>SUB-SEA</u>
Fort Vermilion	242	+591
Watt Mountain	301	+535
Sulphur Point	318	+518
Husheg	404	+432
Keg River	861	-25
Platform	1074	-238

CDR WOOD BUFFALO C-03 60-40 114-30

Latitude 60° 32' 00.04" Longitude 114° 50' 59.91" N.W.T.

Ground Elev. 836'

Core begins at 137' in Slave Point.

137 - 157.5 (20.5')

Limestone, light brown, micrograined to fine grained in a clay size matrix. Skeletal debris from 140 to 147' contains branching corals, amphipora, starchy odes (?) brachipods, cabbage stroms and ostracods. Trace spotty light brown stain, with light streaming cut found in fossils. From 147 to 157.5 grain size increases to fine with clay size matrix and abundant clear calcite infilling voids between fragments. Minor dark brown bituminous partings are present in this interval which give a streaming cut in chlorothene and a light petroliferous odor on a fresh break. No visible porosity. Represents a back barrier or patch reef in lagoonal environment. Ineffective.

157.5 - 173.4 (15.9')

Limestone, light grey, micrograined in mud matrix contains abundant fine dark brown argillaceous laminae (bituminous?). Scattered syneresis cracks, infilled with clear calcite. Trace thin shell brachs. From 158 - 163 and 168.9 to 170 a light brown oil stain picks out an algal type structure with very limited, very fine blind vug porosity. Grain size varies from crypto to very fine grained, streaming cut in chlorothene, good odor on fresh break. Ineffective.

173.4 - 192.4 (19')

Limestone, light brown, fine grained in a cryptograined matrix. No visible porosity. Patchy light brown oil stain throughout, cuts in chlorothene. This is interpreted as originally a fine granular limestone subsequently infilled with chalk. Minor skeletal debris scattered throughout. Scattered wispy argillaceous partings. Becomes quite argillaceous at 184' with a resultant loss of fine grained constituent. Ineffective.

192.4 - 207 (14.6')

Limestone, light brown, fine grained in cryptograined matrix with branching corals and spotty light brown oil stain grades downwards into cemented lump limestone from 197 to 202. Vague pelleting and oolites present with abundant birdseyes and syneresis cracks in lump facies. This in turn is replaced by light buff crypto grained limestone with scattered skeletal debris and wispy argillaceous partings. Above 202 a minor amount of fine pinpoint blind vug porosity with light brown oil stain is present. Ineffective.

- 207 - 208 Core missing.
- 208 - 213 (5') Limestone, light brown, fine grained with crypto grained matrix. Cemented lump limestone present with clear calcite. Scattered birdseyes and synerisis cracks. Scattered thin shell brachiopods. No stain, no porosity, ineffective.
- 213 - 226 (13') Limestone, light brown, microcrystalline with mud matrix, abundant thin argillaceous partings, giving laminated appearance.
- 226 - 242 (16') Limestone, light grey brown, micro granular, cemented, with scattered poor fine vug porosity. One 0.5' section at 227 appears to be a weathered fossil fragment, (coral possibly?) with fair to good vuggy porosity due to fine granular texture. Porosity is reduced by chalk matrix in part. No shows, ineffective.

Core missing from 229.8 - 236.7
238 - 242.6

FORT VERMILLION 242

- 242 - 247 (5') Interbedded dolomite, anhydrite and gypsum. The dolomite is a light greyish brown, mud textured, primary sediment with fine bands of clear gypsum and white to tan primary anhydrite banding is suggestive of algal activity. Some grey marbling effect in upper 1 foot.
- 247 - 251 (4') Limestone, light brown, micrograined in crypto grained matrix with interval 248-250 composed of cemented lump limestone. Cemented with clear calcite and infilled with clear gypsum. Trace finely disseminated pyrite. Trace pellets.
- 251 - 263 (12') Dolomite, light brown, microcrystalline, subhedral, dense with some fine pyrite blebs with some thin interbedded limestone, light brown mud textured.
- 263 - 271 (8') Limestone, light brown to buff, micrograined with crypto-grained matrix plugging pore space. Trace of poor pin point to $\frac{1}{4}$ " blind vug porosity, no shows, ineffective.
- 271 - 275 (4') Dolomite, light brown, crypto-crystalline, subhedral, dense, trace finely disseminated pyrite blebs contains some carbonaceous plant imprints. Tight.
- 275 - 295 (20') Interbedded dolomite, anhydrite and gypsum. Dolomite, light grey brown, micro crystalline, subhedral, crypto-crystalline matrix, contains fair quantity of finely disseminated pyrite. Some algal bands present. Dolomite occurs in beds up to 1 foot thick. Anhydrite is white secondary and occurs in beds up to 2 feet in thickness which contains fragments of enclosing dolomite, some anhydrite occurs in pillow like forms. The gypsum

275 - 295 (20') Continued..

occurs as clear fracture filling, some yellow sulfur stain from 280 to 286. No hydrocarbon shows, core missing 288 - 292.

295 - 301 (6')

Interbedded limestone and anhydrite.

Limestone is light grey, micro to crypto grained with scattered finely disseminated pyrite. Trace pin point vug porosity, partially infilled with clear gypsum. Ineffective. Anhydrite is white, secondary, enclosing fragments of limestone, tends to a marbled appearance in part. Basal 2' of interval contains stringer of limestone, light grey brown, pelleted in cryptocrystalline matrix, tight.

WATT MOUNTAIN 301'

301 - 318 (17')

Limestone, light grey to light brown, mud textured in part, ranging to micrograined to pelleted. Pelleted variety is in a cryptograined matrix. All contain blebs and thin interbeds of light green waxy shale as well as finely disseminated pyrite. Some open vertical fracturing present. Core lost from 302 - 309 (Driller notes as mud seam) and from 311 - 313.

SULPHUR POINT 318

318 - 328.5 (10.5')

Limestone, light to medium grey brown, fine grained set in micro to cryptograined matrix. Tends to a cemented lump limestone. Some pellets and coralline material identifiable. Porosity is fair to good fine vuggy (pin point to pencil point) contains black oil residue which gives a light streaming cut in chloroethene. Some vertical fractures; effective.

328.5 - 337.0 (8.5')

1 foot recovery, dolomite, light brown, medium crystalline subhedral interlocking. Scattered fine vug (up to $\frac{1}{2}$ ") porosity with black tarry residue. No fluorescence, no cut. 1 partially open oblique fracture. Poorly effective, trace white tertiary dolomite infilling vugs and fractures.

337 - 369.5 (32.5')

No recovery. 351-352, 356.8 - 361.8

3' limestone, light brownish grey, fine grained in crypto grained matrix, minor vuggy porosity grades downwards into 4.5' limestone, light brown mud textured, fractured with green shale infilling fractures. Scattered fine vugs with tarry black bitumen infilling. This in turn grades downwards into organic lattice with fair to good vuggy and coralline type of porosity. Scattered trace of intergranular porosity. Fractures common, bitumen as above in vugs and fractures.

337 - 369.5 (32.5')

Continued.

Light streaming cut from 355-356.8 from a fine, intergranular type of porosity. Remainder of section does not cut. Effective.

369.5 - 395.4 (25.9')

Dolomite, light brownish grey, fine to medium crystalline, subhedral, interlocking, scattered fine vug porosity, generally crypto to microcrystalline matrix. Scattered finely disseminated black bitumen. Texture grades to a dolomitized mud in some spots. Scattered vertical and oblique fractures, partially open. Scattered algal laminations throughout. Upper 1 foot has heavy medium brown oil stain which cuts freely. Some evidence of intra-formational brecciation, trace white tertiary dolomite. Poorly effective. Core missing 379.4-384.9
390 - 392

395.4 - 404 (8.6')

Limestone, medium brown, fine grained, grading to fine granular in part with cryptograined matrix, scattered intergranular and fine vug porosity. No shows. Poorly effective, core lost 395.4 - 400.

MUSKEG 404

404 - 460.5 (56.5')

Anhydrite, light brown to white, primary with clear gypsum infilling fractures. Some thin (0.5' to 2') interbeds of dolomite, light brownish grey, microcrystalline, subhedral, dense. Both anhydrite and dolomite have strong algal laminations which indicate dip up to 35° and an average of about 20° decreasing with depth to about 5° at 450', minor inclusions of dolomite fragments present in anhydrite 457-458.

Core Missing

414 - 421
462.9- 470.8
479.4- 482.4
484 - 486
486.5- 493
495 - 498.6
506.8- 508
512 - 529
532.6- 538

460.5 - 462.9 (2.4')

Dolomite, light brown fine crystalline, subhedral, partially interlocking, fair to good intercrystalline porosity, no show, effective.

470.8 - 499.6 (28.8')

Anhydrite, grey white and brown primary as above with thin interbeds of clear gypsum. Some beds of dolomite (1 to 2' thick) light brown fine crystalline, subhedral interlocking with poor intercrystalline porosity. One dolomite beds contains either amphipora or branching coral casts infilled with white secondary anhydrite. Ineffective.

- 499.6 - 512 (12.4') Dolomite, light brownish grey, fine crystalline, subhedral, interlocking scattered poor intercrystalline porosity, contains some vague amphipora or coral like halo's, dark grey wispy argillaceous shale partings scattered throughout. Doubtful effective. Core missing 506.8 - 509.
- 512 - 529 No core recovered.
- 529 - 543 (14') Dolomite, light brownish grey, very fine to fine crystalline, subhedral, interlocking with poor to fair intercrystalline porosity and some fine vug porosity. Scattered amphipora and or coral halo's. Wispy dark argillaceous shale partings throughout. 0.5' bed blue grey anhydrite, slightly dolomitic at 541. No recovery 533 - 540.5.
- 543 - 550 (7') No recovery.
- 550 - 633 (83') Anhydrite, white, brown, grey, primary with occasional thin clear gypsum interbed. (Shrinkage cracks?). Dolomite, brown to brownish grey, micro to fine crystalline subhedral interlocking, dense, occurs as 1 to 2 foot beds. From 592 - 593 a dolomitized organic lattice has been infilled with white primary anhydrite. Some of the dolomites have a pronounced algal laminate structure indicating 5° to 10° dips. Trace fine vug porosity, ineffective.
- Core missing:
- 553.7 - 558.5
561 - 575.5
579.5 - 582.8
584.2 - 592
596.8 - 622
623.8 - 633
- 633 - 635.7 (2.7') Dolomite, light grey micro crystalline, subhedral, partial interlocking with fair intercrystalline porosity, no shows. Appears to be a dolomitized lump limestone. Some wispy shale partings. 10° dip. Effective.
- 635.7 - 645.0 Lost core.
- 645.0 - 646 (1.0) Anhydrite, blue grey to white primary with thin bands of brown primary dolomite which indicate a dip of 45° Trace of pyrite and trace clear gypsum infilling cracks in anhydrite.
- 646 - 650.6 (4.6') Lost core except for small amount of rubble composed of white primary anhydrite and dolomite, light brown, fine crystalline subhedral interlocking, dense.

- 650.6 - 658.6 Core Missing.
- 658.6 - 671 (12.4') Dolomite, light brown to brownish grey, very fine to fine crystalline, subhedral interlocking, some intercrystalline porosity has been infilled with secondary white anhydrite. Some fine vugs and fractures are infilled with brown translucent anhydrite. Numerous fine laminae indicate dips ranging between 25° and 60° with average about 35° . Laminae in basal 1 foot indicate beds are vertical as does the 3 feet of rubble above it.
- 671 - 690 (19') Core lost except for 0.2' . White anhydrite @ 673 and 0.3' of dolomite @ 688.0', light brownish grey, sand textured with common pin point blind vugs. Abundant 1 mm laminae of clear gypsum are present with a 45° dip.
- 690 - 693 (3') Dolomite, light greyish brown, very fine crystalline, subhedral, interlocking abundant pin point to pencil point blind vugs possibly fossil casts. Some thin argillaceous laminae dipping @ 45° .
691 - 69.5 - Core missing.
- 693 - 702.5 (9.5') Core missing.
- 702.5 - 703 (0.5') Dolomite as above, some vertical fractures infilled with clear gypsum. 45° dips as above.
- 703 - 713 (10') Core missing.
- 713 - 714.5 (1.5') Dolomite, light brown, very fine to fine crystalline tending to rhombic with good to excellent intercrystalline porosity. No shows. Effective.
- 714.5 - 719.8 (5.3') Dolomite, light brownish grey, fine crystalline, subhedral, interlocking with trace intercrystalline porosity. Porosity generally obliterated by secondary anhydrite infill. Dips not readily apparent but still appear to be 35° to 45° .
- 719.8 - 722.8 (3') Core missing.
- 722.8 - 725 (2.2') Dolomite, light brownish grey, fine crystalline, subhedral, partially interlocking with fair to good intercrystalline and fine fossil cast vug porosity. No shows. Effective. Overlain by 0.3' grey dolomitic anhydrite.
- 725 - 742 (17') Core missing.
- 742 - 743 (1') Dolomite, light brown, fine crystalline, subhedral, interlocking, trace intercrystalline porosity. No shows. Ineffective.
- 743 - 752 (9') Core Missing.

- 752 - 753.6 (1.6') Dolomite, light brownish grey, fine crystalline, subhedral, tending to rhombic, porosity is obliterated by white secondary anhydrite. Wispy argillaceous partings indicate a 5° dip.
- 753.6 - 762.2 (8.6') Anhydrite, white with enclosed blebs (up to 1/4") of brown anhydrite and brown dolomite (micro crystalline, dense). Some thin dolomitic bands indicate probable collapse on removal of underlying evaporites immediately post deposition.
- 762.2 - 763 (0.8') Organic lattice, dolomite, light brownish grey, micro crystalline, subhedral, interlocking with abundant pin point to 1" vug porosity. Due to fossil casts and corraline material. No shows, effective.
- 763 - 770.6 (7.6') Core missing.
- 770.6 - 776 (5.4') Dolomite, light brownish grey, very finely crystalline, subhedral, interlocking, dense with vague outline of large round stromatoporoid underlain by white to tan primary anhydrite.
- Core missing 773 - 775.5
- 775.5 - 845 (69.5') Interbedded dolomite and anhydrite. Dolomites vary from fine crystalline, subhedral, partial interlocking with limey chalk infill to dolomitized lime mud. Occasionally some poor to fair intercrystalline porosity develops. Thin wispy argillaceous partings indicate 5 to 10° dips. The anhydrite is mainly tan primary with white secondary anhydrite infilling a network of shrinkage cracks. Trace clear gypsum, occasionally some fine fragments of brown resinous anhydrite caught up in tan anhydrite.
- Core missing 791.6 - 795.9
797.5 - 801
805.5 - 808
809.9 - 818.2
834.4 - 845
- Anhydrite and dolomite occur in beds 1 to 3' thick except for interval 821.5 - 834.4 which is mainly primary anhydrite with indicated dip of 20 - 25°.
- 845 - 861 (16') Dolomite, grey brown, microcrystalline with crypto crystalline matrix, thin wispy dark brown argillaceous partings, trace intercrystalline porosity. Interbedded with anhydrite, grey to light brown primary with thin laminae of tan dolomite, mud texture which increase in % to become dominant facies about 2 feet above Keg River Reef.

Con't...

845 - 861 (16') Con't.

Trace clear gypsum with flakes of black bituminous or argillaceous material imbedded in it. Dips average about 20°. Core missing 846 - 853.6.

Keg River 861.0'

861 - 861.6 (0.6')

Dolomite, light greyish brown, micro crystalline, subhedral, dense, contains a vague outline of a bulbous stromatoporoid.

861.6 - 865.5 (3.9')

Core missing.

865.5 - 933 (67.5')

Dolomite, light brown, fine crystalline, decreasing to very fine crystalline with depth, subhedral, interlocking. Poor to fair intercrystalline and intra fossil porosity but generally poor. Contains scattered fragments of colonial corals in upper portion of interval. Larger vugs possibly partially collapsed. Fossil casts have been completely infilled with clear gypsum as have numerous fine random fractures. Some black bituminous partings, trace pyrite. Generally ineffective.

Core missing 873.0 - 876.6

878 - 889.1

889.5 - 897

908 - 909

912 - 914

915 - 919.6

933 - 934.6

934.6 - 959 (24.4)

Crinoidal unit, dolomitized, skeletal limestone made up of well preserved crinoid ossicles set in a micro to fine crystalline dolomite, very limited fine vug porosity, scattered shiny black bituminous partings. Some thin zones of branching and cup corals, some larger vugs are partially collapsed and infilled with clear gypsum. Ineffective.

Core missing 949.6 - 954

959 - 964.6

964.6 - 967 (2.4)

Dolomite, light brown, fine crystalline, subhedral, partially interlocking, poor to fair intercrystalline porosity. Scattered crinoidal and coral debris contribute some intra fossil porosity. No shows. Effective.

967 - 1034.6 (67.6')

Dolomite, light to medium brown, micro to very fine crystalline, subhedral interlocking, dense, numerous wispy black shale partings, some thin shelled brachiopods, occasional crinoid. Some large vugs and fine fractures infilled with clear gypsum.

Core missing:	974.5 - 976 977 - 980 990 - 994 1001.6 - 1004 1005 - 1014 1019 - 1025.3 1026.0 - 1034.6
1034.6 - 1074 (39.4')	Dolomite, light to medium brown, micro to very fine crystalline, subhedral, interlocking, dense, abundant crinoid fragments, scattered fractures infilled with white dolomite. From 1041 - 1046.6 a number of thin dark grey shale interbeds and fine intraformational conglomeratic fragments are present. Dark grey shaley & pyritic zone from 1057 - 1057.3. Core missing 1035.6 - 1040 1046.6 - 1050.4 1053 - 1057 1061.6 - 1068 1069 - 1074
Keg River Platform 1074	
1074 - 1076.6 (2.6')	Shale, light grey, very calcareous, contains scattered blebs, finely disseminated pyrite and abundant buff coloured calcareous crinoid and brachiopod debris.
1076.6 - 1079.3 (2.7')	Core missing.
1079.3 - 1082.6 (3.3')	Lime mud, light greyish brown with scattered crinoid debris, as above.
1082.6 - 1084 (1.4')	Core missing.
1084 - 1084.5 (0.5')	Dolomite, light brown, micro to very finely crystalline, subhedral, interlocking dense, trace crinoidal debris.
1084.5 - 1111.5 (27')	Core missing.
1111.5 - 1115.5 (4')	Dolomite, light to medium brown, very fine to fine crystalline, subhedral interlocking, dense with occasionally blind vug $\frac{1}{2}$ " to $\frac{1}{2}$ " partially lined with either clear coarse dolomite rhombs or brown medium rhombic dolomite. Formed by brachiopod shells. No shows. Scattered crinoid debris except for basal 0.5' which is a dolomitized skeletal limestone, composed of medium to coarse subhedral dolomite, interlocking with abundant crinoid debris, dense. Ineffective.
1115.5 - 1123. (8')	Core missing.
1123 - 1125 (2')	Dolomite medium brown micro to very fine crystalline, subhedral interlocking, dense, trace calcite lined

1123 - 1125 (2') Cont'..

fractures. (Core mainly rubble). Trace fossil casts as above.

1125 - 1133 (8')

Core missing.

1133 - 1135 (2')

Dolomite, medium brown, fine to coarse crystalline, subhedral, interlocking, dense, abundant crinoid debris. Abundant thin wispy dark brown shale partings (bituminous?). Trace fine fractures infilled with white dolomite.

1135 - 1142 (7')

Core missing:

1142 Total Depth

Company: <u>Central Del Rio Oil Rtd</u>		Hole No. <u>#2</u>		DRILLING RECORD	APOLLO EXPLORATION LTD.
Property Location: <u>Hay River</u>		Size: <u>AW</u>	Casing:	Inclination:	T.D:
		Date Began:	Date Finished:		
Date	Employees	Footages	Hours	Remarks	
May 11	D Frank	From	8 ✓	put a new runner on the sloop. Cut timber for set up and start building set up	
	H Stan	To	8 ✓		
	D John	From	8 ✓		
	H Charlie	To	8 ✓		
	D Jerry	From	8 ✓		
	H	To			
May 12	D Frank	From	10 ✓	Rain very hard quit working at 4 PM made last trip to #1 hole and cleaned up old set up and camp site. build leather and cut more timber for set up	
	H Stan	To	13 ✓		
	D John	From	10 ✓		
	H Charlie	To	13 ✓		
	D Jerry	From	13 ✓		
	H	To			
May 13	D Frank	From	13 ✓	pull machine on set up and anchor down cut pads for tripart very soft ground at dull site	
	H Stan	To	13 ✓		
	D John	From	13 ✓		
	H Charlie	To	13 ✓		
	D Jerry	From	13 ✓		
	H	To			
May 14	D Frank	To	13 ✓	tried to raise tripart twice chain broke off. Finish raising tripart and start drilling casing and start building staging on tripart	
	D Stan	From	13 ✓		
	H John	To	13 ✓		
	D Charlie	From	13 ✓		
	H Jerry	To	13 ✓		
	D	From			
	H	To			
Foreman: _____		Authorized Company Rep. <u>D. Mc Louch</u>			

Company: <i>Central Del Rio Oil Field</i>		Hole No: <i>20</i>		Size:	Casing:	Inclination:	TD:
Property Location: <i>Hay River M.H.T.</i>		Date Began:		Date Finished:			
Date	Employees	Footages	Hours	Remarks			
<i>May</i>	<i>D Frank</i>	From <i>20</i>	<i>14</i> ✓	<i>drilling casing boulders & gravel</i> <i>Kerry went to town to get cement and supply</i>			
	<i>H Stan</i>	To <i>60</i>	<i>14</i> ✓				
	<i>D John</i>	From	<i>14</i> ✓				
	<i>H Charlie</i>	To	<i>14</i> ✓				
	<i>D Kerry</i>	From	<i>14</i> ✓				
	<i>H</i>	To					
<i>May</i>	<i>D Frank</i>	From <i>60</i>	<i>4</i> ✓	<i>drill casing to 80 ft. Shut down at noon</i> <i>took the boys to town for an out</i> <i>Charles stayed in camp to keep the bears away</i>			
	<i>H Stan</i>	To <i>80</i>	<i>4</i> ✓				
	<i>D John</i>	From	<i>4</i> ✓				
	<i>H Charlie</i>	To	<i>12</i> ✓				
	<i>D Kerry</i>	From	<i>12</i> ✓				
	<i>H</i>	To					
<i>May</i>	<i>H</i>	<i>no shift</i>					
<i>May</i>	<i>D Charlie</i>	From	<i>12</i> ✓	<i>guarding camp, cut wood build out house</i>			
	<i>H</i>	To					
<i>May</i>	<i>D Frank</i>	From					
	<i>H Stan</i>	To					
<i>May</i>	<i>D John</i>	From <i>80</i>	<i>11</i> ✓	<i>drill casing to 133 ft down</i>			
	<i>H Charlie</i>	To <i>133</i>	<i>11</i> ✓				
<i>May</i>	<i>D Frank</i>	From <i>133</i>	<i>11</i> ✓	<i>drill casing to bedrock at 137 ft. Stan</i> <i>BX casing drill down to 139. BX Casing</i> <i>Broke off at 88 ft down</i>			
	<i>H Stan</i>	To <i>137</i>	<i>11</i> ✓				
	<i>D Kerry</i>	From	<i>12</i> ✓				
	<i>H</i>	To					
	<i>D</i>	From					
	<i>H</i>	To					
Foreman:		Authorized Company Rep. <i>J. Mc Lure</i>					

DRILLING RECORD APOLLO EXPLORATION LTD.

Company:

Hole No:

Size:

Casing:

Inclination:

T.D:

Property Location:

Date Began:

Date Finished:

Date	Employees	Footages	Hours	Remarks
May 19	D John	From	12✓	Flushed out BX. casing Man hurt at 10 ⁰⁰ A.M.
	H Charlie	To	2✓	
	D Frank	From	12✓	
	H Stan	To	12✓	
	D Jerry	From	16✓	
	H	To		
May 20	D John	From	12✓	Charles Hiranik. Drill stop for a while drillers help me to look after charlie and take him to Hospital
	H Frank	To	12✓	
	D Stan	From	12✓	
	H Jerry	To	14✓	
	D	From		
May 21	H John	To	13✓	proceed with casing and drill in bed rock to 141 ⁷ very hard to get through talcum sand very hard going casing sanding
	D Frank	From	13✓	
	H Stan	To	13✓	
	D Jerry	From	13✓	
	H	To		
May 22	D John	From	14✓	drill BX. casing down to 143 ft deep and AX casing to 150 ft. Start BX casing and Brocke off at 68 ft down casing cut off by quick sand at a point Gone to town to get bentonite and NX casing fish and tried all day hook broken casing but had to give it up impossible to hook them lost in the hole 12 ft of NX casing 1-NX casing shot. 7.5 ft AX casing 1-BX casing shot. Should be BX casing.
	H Frank	To	14✓	
	D Stan	From	14✓	
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
Foreman: _____				Authorized Company Rep. <u>D. Joe Lamm</u>

Company: <i>Central Del Rio</i>		Hole No: <i>oils Rtd</i>	DRILLING RECORD		APOLLO EXPLORATION LTD.	
Property Location: <i>Woods Buffalo Park</i>		Size:		Casing:	Inclination:	TD:
Date Began:		Date Finished:				
Date	Employees	Footages	Hours	Remarks		
<i>May 23</i> <i>Day</i> <i>Night</i>	D John	Casing 0'	12 ✓	Phone Hay River and got permission to overburden		
	H Mike Jakubowski	19	11 ✓	Premise hole and start a new hole 2 ft south		
	D Frank	From 19	17 ✓	on the same set up. Move drill and tripod 2 ft		
	H Stan	To 58	17 ✓	south and start new hole (Gerry 17 hrs)		
<i>May 24</i> <i>Day</i> <i>Night</i>	D John	From 58	12 ✓	NX Casing		
	H Mike Jakubowski	80	12 ✓	Spur going using mach (Gerry 14 hrs)		
	D Frank	From 80	12 ✓	Stan sick for one shift		
	H Mike	To 109	17 ✓	N.X. Casing down to 93 ft continue with AX to 109		
<i>May 25</i> <i>Day</i> <i>Nite</i>	D John	From				
	H Stan					
	D Frank	From				
	H Stan	To				
	D Gerry	From				
	H	To				
	D	From				
	H	To				
	D	From				
	H	To				
	D	From				
	H	To				
	D	From				
	H	To				
	D	From				
	H	To				
Foreman: _____		Authorized Company Rep. <i>AJ. Mc Lush</i>				

678 4.3
213

CDR Wood Buffalo CO3

Company: <i>Central Del Rio City</i>		DRILLING RECORD		APOLLO EXPLORATION LTD.		Inclination: TD:	
Property Location: <i>Wood Buffalo Park</i>		Size:		Casing:		Date Began:	
Date		Employees		Footages		Hours	
						Remarks	
MAY DAY NITE	25	D John	From 109	12	✓	drilling B.X. Casing down	
		H Stan	To 120	7	✓		
		D Frank	From -	8	✓		
		H Stan	To -	8	✓		
		D Jerry	From	16	✓		
		H	To				
may day ntr may	26	D John	From	8	✓	no work night shift. Standing by went to town to get casing & fan belt build pads & cat walk at the drill set up Back from town with casing at 9 PM drill from ^{B.X.} 120 to 142 drill B.X. to 149 drill A.X. from 149 - 158	
		H Mike	To	8	✓		
		D Frank	From 120	18	✓		
		H Stan	To 142	18	✓		
		D Jerry	From	18	✓		
		H	To				
May day ntr	27	D John	From 142	12	✓	drill BX to 149 and A.X. to 158	
		H Mike	To 149	12	✓		
		D Frank	From 149	12	✓		
		H Stan	To 152	12	✓		
		D Jerry	From	16	✓		
		H	To				
May day ntr	28	D John	From 152	15	✓	drill A.X. casing to 212. Tried to loosen up B.X. casing. Impossible casing back off at 123 ft down impossible to fish it out Cement A.X. from 147 to 212 in bed rock	
		H Mike	To 212	13	✓		
		D Frank	From	12	✓		
		H Stan	To	9	✓		
		D Jerry	From	16	✓		
		H	To				
Foreman: <i>J. A. Karamis</i>		Authorized Company Rep. <i>D. Mc Laver</i>					

Company:

Central Del Rio Oil & Gas
Wood Buffalo Creek

Hole No:

Size: 6 1/2" #2

Casing:

Inclination:

T.D:

Property Location:

Flag River M.W.T.

Date Began:

Date Finished:

Date	Employees	Footages	Hours	Remarks
May 29	D John	From Cement	12 ✓	Cement job OK has with portland cement working around the drill while cement
	H Mike	To	12 ✓	
	D Frank	From	12 ✓	
	H Stan	To	12 ✓	
	D Kerry	From	17 ✓	
	H	To		
May 30	D John	From 212	12 ✓	(drill core) BX from 147 ft to 212. drill AX from 212 on
	H Mike	To 236	12 ✓	
	D Frank	From 236	12 ✓	
	H Stan	To 256	12 ✓	
	D Kerry	From	14 ✓	
	H	To		
May 31	D John	From BX 0	12 ✓	Cemented. got cement Fonda from Comins Point divide to drill casing down to 256 ft down
	H Mike	To 75	12 ✓	
	D Frank	From 75	14 ✓	
	H Stan	To 123	14 ✓	
	D Kerry	From	16 ✓	
	H	To		
June 1	D John	From	12 ✓	Impossible to start AX casing to drill down further. Cement hole from 130 ft in casing down to 256. Cement set good above and below core at 213.6. waited for cement to set 12 hrs
	H Mike	To	12 ✓	
	D Frank	From 256	12 ✓	
	H Stan	To 292	12 ✓	
	D Kerry	From	16 ✓	
	H	To		
Foreman: J. A. Karamis				Authorized Company Rep. D. M. Laver

Company: <i>Central Del Rio Oil, Ltd</i>		DRILLING RECORD		APOLLO EXPLORATION LTD.		Inclination:		TD:	
Property Location: <i>Wood Buffalo #2</i>		Size:		Casing:		Date Began:		Date Finished:	
June 2 Employees Footages Hours Remarks									
June Day with	D John	From	200	16	drill cement from 200 to 250 ft. down				
	H Mike	To	250	16					
	D Frank	From		12					
	H Stan	To		12					
	D Kerry	From		18					
	H	To							
June	D John	From	190	7	Cement won't set between 213 to 236 waited 12 hrs for cement to set No cement under heavy pressure				
	H Mike	To	240	7					
	D Frank	From	240	12					
	H Stan	To	292	12					
	D Kerry	From		16					
	H	To							
June	D John	From	292	12	drill cement from 190 to 292. cement won't set between 213 to 236 and between 260 to 280				
	H Mike	To	308	12					
	D Frank	From	308	12					
	H Stan	To	384	12					
	D Kerry	From		16					
	H	To							
June	D John	From	384	12	shale bed from 304 to 308 shale and small bed of rock all the way hardly any core				
	H Mike	To	451	12					
	D Frank	From	451	12					
	H Stan	To	506	12					
	D Kerry	From		16					
	H	To							
June	D John	From	384	12	very soft. shale 460 and 471 had core at 478 deep stone at 480 and 486. hole caving in at 375				
	H Mike	To	451	12					
	D Frank	From	451	12					
	H Stan	To	506	12					
	D Kerry	From		16					
	H	To							
Foreman: <i>J. A. Karamis</i> Authorized Company Rep. <i>D. Mc Lennan</i>									

Company:

Central Del Rio oil Rtd
wood Buffalo Park

Hole No: #2

Size:

Casing:

Inclination:

T D:

Property Location:

Hay River M.W.T.

Date Began:

Date Finished:

Date	Employees	Footages	Hours	Remarks
6	D John	From 506	12 ✓	very soft and shale and layer of rock all the way bad core at 552 and 561
	H Mike	To 550	12 ✓	
	D Frank	From 550	12 ✓	
	H Stan	To 595	12 ✓	
	D Jerry	From	14 ✓	
7	H	To		supply pump broke down repair finish repairing pump and drill rods stuck at 515 ft shale and core all the way very hard to drill. The rods hooks going down and coming up every trip. some time it takes 3 hrs to put the rods down
	D John	From 595	9 ✓	
	H Mike	To —	9 ✓	
	D Frank	From 595	15 ✓	
	H Stan	To 645	15 ✓	
	D Jerry	From	16 ✓	
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
	D	From		
	H	To		
Foreman: J G Karamis				Authorized Company Rep. Dne Larnish

June
day
mike
June
day
mike

DRILLING RECORD

APOLLO EXPLORATION LTD.

Company:

Contract Del Rio Cils Ltd

Hole No:

2

Size:

Casing:

Inclination:

T D:

Property Location:

May River

Date Began:

Date Finished:

Date	Employees	Footages	Hours	Remarks
8	D. John	From 640	12	very soft and muddy. Shell and beds of rocks Red drop 1 ft. no rock
	H. White	To 691	12	
	D. Banks	From 691	11	
	H. Star	To 743	11	
	D. Kewey	From	14	
9	H.	To		
	D. John	From 743	12	very soft and muddy
	H. White	To 783	12	
	D. Banks	From 783	12	very muddy and sticky Kewey 14 hrs
	H. Star	To 824	12	
10	D. John	From 824	12	very sticky and not muddy
	H. White	To 856	12	
	D. Banks	From 856	12	layer of rock very soft muddy Kewey 14 hrs
	H. Star	To 907	12	
11	D. John	From 907	12	very sticky rock getting harder. Kewey 14 hrs
	H. White	To 934	12	
11	D. Banks	From 934	12	very sticky. some in hole rocks hard to get down.
	H. Star	To 976	12	
12	D. John	From 976	12	very sticky. Kewey 14 hrs
	H. White	To 1004	12	
12	D. Banks	From 1004	12	very sticky
	H. Star	To 1040	12	
13	D. John	From 1040	12	very sticky and muddy Kewey 14
	H. White	To 1074	12	
			12	
Foreman:				Authorized Company Rep.

Same
day
with

DAY

note

DAY

note

DAY

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DAY

note

DAY

CDR Wood Buffalo CO3

DRILLING RECORD APOLLO EXPLORATION LTD.

Company:

Hole No:

Size:

Casing:

Inclination:

TD:

Property Location:

Date Began:

Date Finished:

Date	Employees	Footages	Hours	Remarks
13	D. Carb	From 1074	12	Soft cave very hard to get into
	H. Carb	To 1108	12	very muddy and sticky 3 at 1100 ft.
DAY 14	D. Carb	From 1108	12	at approximately 1090 ft.
	H. Carb	To 1143	12	very sticky and soft.
14	D. Carb	From 0	12	very 14 hrs. not very hard to get into
	H. Carb	To 0	12	instructions from Cal-gard -
DAY 15	D. Carb	From	14	Get casing rods to A.H. being impossible
	H. Carb	To moving	14	to pull out 73 ft. of B.X. plus casing
	D. Carb	From	14	three days in hole plus 26 ft. and
	H. Carb	To	14	being the previous by total 99 ft
	D. Carb	From	16	plus 2 shafts B.X.
	H. Carb	To		A.X. casing 212 ft. plus 1 shaft.
	D. Carb	From		Cementing hole from 800 ft. down
	H. Carb	To		to bottom, plug hole at 800 ft.
	D. Carb	From		Cement to surface. Cement supply
	H. Carb	To		by company. Start moving to
	D. Carb	From		hole #2. approx. 9 miles away
	H. Carb	To		at 1100 ft.
DAY 16	D. Carb	From	20	waiting to hole #3 & traps with
	H. Carb	To	20	equipment. Fuel pump broke on
	D. Carb	From	17	m. 5 buggy had to repair on way.
	H. Carb	To	17	

Foreman:

Authorized Company Rep.