

N.E.B. COPY

AEC OIL & GAS LTD.
GEOLOGICAL REPORT
AEC(WEST) RENAISSANCE CARCAJOU P-16
p 16

Prepared by. Glen MacIntosh

**Cabra Consulting
1623 - 48th Avenue S.W.
Calgary, Alberta
T2T 2S9
(403) 243-5022**

Reported to. Mr. Glen Andrews

AEC (WEST) RENAISSANCE CARCAJOU P-16

TABLE OF CONTENTS

Well Data Summary	-----Page 1
Geological Markers	-----Page 3
Daily Summary	-----Page 4
Mud Record	-----Page 6
Bit Record	-----Page 7
Deviation Summary	-----Page 8
Open Hole Logs	-----Page 9
Core Report	-----Page 10
Sample Descriptions	-----Page 12
Lithology Log Pocket	-----Page 16

AEC (WEST) RENAISSANCE CARCAJOU P-16

WELL DATA SUMMARY

Company: AEC (West)

Well Name: AEC (West) Renaissance Carcajou P-16

Surface Location: 65°35'56.97278" N, 128°17'18.15527" W

Surface Co-ordinates: Northing: 7275226.705, Easting: 532805.104

Elevations: *Ground:* 86.4 meters
Kelly Bushing: 90.7 meters
K.B. to Ground: 4.3 meters

Unique Well I.D.: 300P166540128150

Field: Exploratory

Classification: NPW

Objectives: *Primary* – Kee Scarp

Terminating Zone: Hare Indian

Security: Tight

AFE Number: 5000046

Licence Number: 1889

Spud Date: 0315 Hrs., February 25, 2000

Total Depth: 669 meters @ 0545 Hrs, March 3, 2000

AEC (WEST) RENAISSANCE CARCAJOU P-16

Sampled Interval: **AEC/Ren:** 136 to T.D. meters (5 & 2.5 meter intervals)
Gov't: 136 to T.D. meters (5 & 2.5 meter intervals)

Contractor: Akita Drilling # 14

Drilling Supervision: Lynn Sandquist

Geological Supervision: Glen MacIntosh

Hole Size: **Surface:** 311.2 mm
Intermediate: 222 mm
Main: 156 mm

Surface Casing: **Size:** 244.5 mm
Type: 11 joints of 53.57 kg/m J-55
Landed @ 136.0 meters
Cement: 11.0 Tonnes Arctic Set + additives
Plug down @ 2123 Hrs February 26, 2000

Intermediate Casing: **Size:** 177.8 mm
Type: 41 joints of 34.2 kg/m J-55
Landed @ 508.0 meters
Cement: 11.5 Tonnes RFC + additives
Plug down @ 0240 Hrs February 29, 2000

Production Casing: **Size:** 114.3 mm
Type: 56 joints 14.1 kg/m J-55 ST-C
Landed @ 669 meters
Cement: 10.0 Tonnes RFC + additives
Plug down @ 0035 Hrs March 4, 2000

<u>Open Hole Logs:</u>	Schlumberger	
Log	Interval Logged	Scale
CNL-LDT-DLL	663 to 508 meters	1:240 & 1:600
BHCS-GR	666 to 508 meters	1:240 & 1:600

Final Status: Casing ran / abandoned

Rig Release: 0600 Hrs, March 4, 2000

AEC (WEST) RENAISSANCE CARCAJOU P-16

GEOLOGICAL MARKERS

K.B. 90.7 meters

Formation	Prognosis		Samples		Logs	
	Depth (m)	Subsea (m)	MD (m)	Subsea (m)	MD (m)	Subsea (m)
<u>Cretaceous</u>	24.7	66.0	np	np	np	np
<u>Devonian</u>						
Imperial	303.7	-213.0	308.0	-217.3	308.0	-217.3
Canol	502.7	-412.0	504.0	-413.3	508.0	-417.3
Kee Scarp	507.7	-417.0	508.0	-417.3	513.0	-422.3
Hare Indian	624.7	-534.0	637.0	-546.3	637.5	-546.8
Total Depth	675.7	-585.0	669.0	-578.3	668.9	-578.2

AEC (WEST) RENAISSANCE CARCAJOU P-16

DAILY PROGRESS SUMMARY

Date	Costs	Depth @ 2400 Hrs.	Progress (meters)	ROP	Formation	Operation	Operations Summary
2/24/00	\$549,203	27	27	2.3	Cretaceous	Run in hole	Drill 411mm conductor hole. Circulate. Pull out of hole. Run 340mm Conductor barrel. Circulate. Cement conductor. WOC. Rig in diverter. Make up & run in hole with 311mm bit.
2/25/00	\$629,495	136	109	11.5	Cretaceous	WOC	Pressure test. Drill out cement. Spud well @ 0315 Hrs. Drill ahead & survey. Wiper trip. Drill to 136m. Circulate. Pull out of hole. Rig to & run 244mm casing. Circulate. Rig to & cement casing. WOC.
2/26/00	\$660,420	191	55	15.7	Cretaceous	Drill	WOC. Nipple up & pressure test. Run in hole. Pressure test. Drill out cement @ 1930 Hrs. Drill 222mm hole.
2/27/00	\$687,921	442	251	11.5	Imperial	Drill	Drill ahead & survey.
2/28/00	\$811,599	508	66	5.9	Canol	Run casing	Drill ahead & survey to 481m. Wiper trip. Control drill ahead to 508m. Wiper trip. Circulate. Pull out of hole. Rig to & run 177.8mm casing.
2/29/00	\$855,150	508	0		Canol	Circulate	Run casing. Rig to & cement casing. WOC. Nipple up & pressure test. Drill out @ 2215 hrs. Circulate & displace hole to mud.
3/1/00	\$894,794	552	44	4.2	Kee Scarp	Drill	Circulate. Drill ahead. Circulate. Pull out of hole to core. Pick up & make up core barrel. Run in hole. Circulate. Cut 9.0 meters core. Pull out & recover core. Run in hole. Drill ahead.
3/2/00	\$925,044	648	96	4.2	Hare Indian	Drill	Drill ahead & survey.

AEC (WEST) RENAISSANCE CARCAJOU P-16

Date	Costs	Depth @ 2400 Hrs.	Progress (meters)	ROP	Formation	Operation	Operations Summary
3/3/00	\$1,025,904	669	21	3.8	Hare Indian	Cement	Drill to T.D. Circulate. Wiper trip. Circulate. Pull out of hole to log. Rig in & log with Schlumberger. Lay down drill string. Rig to & run production casing. Circulate. Rig in & cement casing.
3/4/00	1,025,904	669	0		Hare Indian	Rig release	Set casing slips. Cut off casing. Tear out rig. Release rig @ 0600 Hrs. Move rig to Carcajou O-74 location

AEC (WEST) RENAISSANCE CARCAJOU P-16

MUD RECORD

Mud up @ 481 meters

Date	Depth (m)	Density (kg/m3)	Viscosity (s/l)	pH	Water Loss
2/29/00	527	1120	44	9.0	14.0
3/1/00	573	1080	45	9.0	9.0
3/2/00	650	1090	60	9.0	9.0
3/3/00	669	1100	45	9.0	9.0

AEC (WEST) RENAISSANCE CARCAJOU P-16

BIT RECORD

Bit No.	Type	Size (mm)	Depth Out(m)	Interval Cut(m)	Hrs	FOB (daN)	RPM	Cond'n			ROP (m/hr)	Comments
								T	B	G		
1A	SDGH	444	27	27	12.0	4000	100	2	E	1	2.3	Conductor
2A	FDT	311	136	109	9.5	8000	200	2	E	1	11.5	Sur Casing
1	FDS+2	222	508	372	33.0	10000	120	3	E	1	11.3	Int Casing
2	XR20TY	156	527	19	4.8	8000	75	1	1	1	4.0	Trip for Core
2RR	XR20TY	156	669	142	34.0	8000	75	3	2	2	4.2	Trip for T.D.

AEC (WEST) RENAISSANCE CARCAJOU P-16

DEVIATION RECORD

Survey No.	Depth (meters)	Deviation (degrees)	Interval (meters)
1	47	0.130	47
2	75	0.250	28
3	102	0.500	27
4	130	0.500	28
5	227	1.000	97
6	324	2.000	97
7	373	2.500	49
8	421	2.500	48
9	469	3.000	48
10	500	2.000	31
11	570	2.000	70
12	657	2.500	87

AEC (WEST) RENAISSANCE CARCAJOU P-16

OPEN HOLE LOG SUMMARY

RUN 1

Logging Company: Schlumberger **Engineer:** Sean McConkey
District: Norman Wells **Truck No.:** 8416
Circulation Ended: 0750 Hrs. 00/03/03 **Finish Trip:** 1000 Hrs. 00/03/03
On Location: 2230 Hrs. 00/03/03 **Off Location:** 1830 Hrs. 00/03/03
Rig Up: 1000 Hrs. 00/03/03 **Rig Down:** 1645 Hrs. 00/03/03
Mud Properties: **Mud Type:** Gel Chem **BHT:** 35.0°C
 Density: 1110 **Rmf:** 1.32 @ 18.0 °C
 Viscosity: 70
 WL: 9.0
 pH: 9.0

Services:

<u>Log</u>	<u>Interval Logged</u>	<u>Meters Logged</u>	<u>Comments</u>
CNL-LDT-DLL	669.0 to 508.0	161.0	1:240 & 1:600
BHCS-GR	669.0 to 508.0	161.0	1:240 & 1:600

Times:

<u>Tool Combo</u>	<u>Date</u>	<u>Start In</u>	<u>First on Bottom</u>	<u>Last on Bottom</u>	<u>Clear Hole</u>	<u>Total Hours</u>
CNL-LDT-DLL	00/03/03	1130	na	1200	1330	2.00
BHCS-GR	00/03/03	1400	na	1550	1645	2.75

Logging Time: 4.75 Hours **Rig Up/Down:** 2.75 Hours

Time Losses: 0 Hours **Total Logging Time:** 7.50 Hours

Remarks: Compensated Neutron logged to surface. Poor Satellite communications prevented lognets from being sent from location. Good job. Fast, friendly & proficient service.

AEC (WEST) RENAISSANCE CARCAJOU P-16

CORE REPORT

Core #1

Company: Baker Inteq

Coring Supervisor: R. Rooney

Formation: Kee Scarp

Interval: 527.6m to 536.6m

Cut: 9.0 meters

Recovered: 9.0 meters

Core Times

From	To	Time	From	To	Time
527.6	527.8	5.0	532.6	532.8	2.0
527.8	528.0	5.0	532.8	533.0	1.5
528.0	528.2	3.0	533.0	533.2	2.0
528.2	528.4	4.0	533.2	533.4	1.5
528.4	528.6	8.5	533.4	533.6	1.5
528.6	528.8	2.5	533.6	533.8	2.0
528.8	529.0	1.5	533.8	534.0	2.0
529.0	529.2	1.5	534.0	534.2	2.0
529.2	529.4	2.0	534.2	534.4	2.0
529.4	529.6	2.0	534.4	534.6	1.5
529.6	529.8	1.5	534.6	534.8	2.0
529.8	530.0	1.5	534.8	535.0	2.0
530.0	530.2	1.5	535.0	535.2	1.5
530.2	530.4	1.5	535.2	535.4	1.5
530.4	530.6	1.5	535.4	535.6	1.5
530.6	530.8	1.5	535.6	535.8	1.5
530.8	531.0	1.5	535.8	536.0	1.5
531.0	531.2	2.0	536.0	536.2	2.0
531.2	531.4	2.0	536.2	536.4	2.0
531.4	531.6	1.5	536.4	536.6	1.5
531.6	531.8	1.5			
531.8	532.0	1.5			
532.0	532.2	1.5			
532.2	532.4	2.0			
532.4	532.6	1.5			

AEC (WEST) RENAISSANCE CARCAJOU P-16

Core Descriptions

Formation: Kee Scarp

Interval: 527.6m-536.6m

527.6 - 531.4 m LIMESTONE - medium to dark brown, calcilutite rare calcarenite, micrite to dismicrite, mudstone to wackestone, burrows & minor fractures infilled with sparry calcite, argillaceous, oil stained in part, spotty fluorescence, white cut in part, trace poor porosity?.
Minor stylolites.

531.4 - 532.6 m LIMESTONE - dark brown, calcilutite, micrite, mudstone, argillaceous, bioturbated, minor fractures infilled with sparry calcite, tight, no shows.

532.6 - 536.6 m LIMESTONE - medium to dark brown, calcilutite to calcirudite, micrite to biomicrite with interbeds of biomicrudite, mudstone to wackestone, rudstone, argillaceous in part, bioturbated in part with sparry calcite infill, tight to trace poor porosity, trace spotty shows, white cut.

End of Core #1

AEC (WEST) RENAISSANCE CARCAJOU P-16

SAMPLE DESCRIPTIONS

136 - 145 m	<p>Interbedded Siltstone & Shale.</p> <p><u>SILTSTONE</u> - dark grey brown, blocky, argillaceous to highly argillaceous, micromicaceous.</p> <p><u>SHALE</u> - dark grey to black, subfissile to subblocky, silty, micromicaceous to micaceous.</p> <p>Abundant cement cavings.</p>
145 - 161 m	<p>Shale with Siltstone interbeds.</p> <p><u>SHALE</u> - dark grey to black, subfissile to subblocky, silty to sandy, micromicaceous.</p> <p><u>SILTSTONE</u> - medium to dark grey to grey brown, blocky, argillaceous to highly argillaceous, micromicaceous.</p> <p>Trace Siderite.</p>
161 - 180 m	<p><u>SANDSTONE</u> - light to medium grey, quartz, silt to very fine grained, subround to subangular, well sorted, well cemented, dolomitic cement, carbonaceous, argillaceous, trace glauconite, tight to trace poor porosity, no shows.</p>
180 - 200 m	<p><u>SHALE</u> - dark grey to black, fissile to subfissile, silty, micaceous, trace disseminated pyrite.</p>
200 - 211 m	<p><u>SHALE</u> - dark grey, blocky to subblocky, micromicaceous;</p> <p>Minor Siderite stringers.</p>
211 - 229 m	<p>Shale with Siltstone interbeds & stringers.</p> <p><u>SHALE</u> - dark grey to black, fissile to subfissile, silty grading to argillaceous</p> <p>Siltstone in part, micromicaceous, trace carbonaceous.</p> <p><u>SILTSTONE</u> - dark grey to grey brown, blocky, argillaceous, micromicaceous.</p>
229 - 240 m	<p>Shale with Siltstone stringers.</p> <p><u>SHALE</u> - dark grey to black, fissile to subfissile, silty grading to argillaceous</p> <p>Siltstone in part, micromicaceous, trace carbonaceous.</p> <p>Minor Siderite.</p>
240 - 250 m	<p><u>SHALE</u> - dark grey to black, fissile to subfissile, silty grading to argillaceous</p> <p>Siltstone in part, micromicaceous, trace carbonaceous.</p>
250 - 260 m	<p><u>SHALE</u> - dark grey, subfissile to blocky, silty, micromicaceous, trace pyrite, carbonaceous in part.</p> <p>Trace Siderite stringers.</p>

AEC (WEST) RENAISSANCE CARCAJOU P-16

- 260 - 280 m Shale with Siltstone interbeds.
SHALE - dark grey to black , subfissile, blocky, silty, micromicaceous, common disseminated pyrite.
SILTSTONE - dark grey to grey brown, argillaceous, sandy grading to very fine Sandstone in part, rare glauconite, micromicaceous.
Abundant cement cavings?.
- 280 - 304 m SHALE - dark grey , fissile to subfissile, silty grading to argillaceous Siltstone in part, micromicaceous, minor disseminated pyrite.
- 304 - 308 m SANDSTONE - light grey to off white, quartz, very fine to minor medium grains, angular to subangular, well sorted, poorly cemented to loose, dolomitic cement, tight to trace poor porosity, no shows.
- 308 - 326 m Siltstone with Shale interbeds & laminae.
(Imperial) SILTSTONE - grey to grey brown, siliceous, sandy grading to very fine Sandstone in part, argillaceous.
SHALE - dark grey, fissile, silty, micromicaceous, trace carbonaceous.
- 325 - 337 m Interbedded Siltstone & Shale.
SILTSTONE - grey to grey brown, siliceous, sandy grading to very fine Sandstone in part, argillaceous.
SHALE - dark grey, fissile, silty, micromicaceous, trace carbonaceous.
- 337 - 365 m Shale with Siltstone stringers.
SHALE - dark grey, fissile to subfissile, platy in part, silty to highly silty, minor carbonaceous material, rare trace glauconite, micromicaceous.
SILTSTONE - grey to grey brown, siliceous, sandy, argillaceous.
Minor Siderite stringers.
- 365 - 385 m Shale with minor Siltstone stringers.
SHALE - dark grey, fissile to subfissile, platy, firm, silty to sandy, trace glauconite, minor disseminated pyrite, micromicaceous.
- 385 - 400 m SHALE - dark grey, fissile to subfissile, platy, firm, silty grading to argillaceous Siltstone in part, trace disseminated pyrite, micromicaceous.
- 400 - 425 m SHALE - dark grey, fissile to subfissile, platy, firm, silty grading to argillaceous Siltstone in part, trace disseminated pyrite, micromicaceous.
- 425 - 445 m Shale with minor Siltstone stringers.
SHALE - dark grey, fissile to subfissile, platy, firm, silty grading to argillaceous Siltstone in part, rare glauconite, trace disseminated pyrite, micromicaceous.
Trace Siderite.

AEC (WEST) RENAISSANCE CARCAJOU P-16

- 445 - 465 m SHALE - dark grey, fissile to subfissile, firm, silty to sandy, trace disseminated pyrite, micromicaceous.
- 465 - 485 m SHALE - dark grey to black, fissile, platy, firm, silty to highly silty, minor disseminated pyrite, micromicaceous.
Minor Siderite & Siltstone stringers.
- 485 - 504 m SHALE - dark grey to black, fissile, platy, firm, silty, minor disseminated pyrite, micromicaceous.
Minor Siderite & Siltstone stringers.
- 504 - 507 m SHALE - dark grey to black, subblocky to blocky, minor disseminated pyrite,
(*Canol*) slightly silty, calcareous, slightly bituminous.
- 507 - 513 m SHALE - dark grey to black to deep brown, fissile to subfissile, blocky, carbonaceous, bituminous, calcareous in part.
- 513 - 524 m LIMESTONE - white to dark brown, fine to coarse calcirudite, stromatoporoid
(*Kee Scarp*) biomicrite, floatstone to rudstone, micrite to coral biomicrite matrix, slightly argillaceous, spotty to even oil staining, slow white cut, tight to trace poor chalky porosity.
- 524 - 527.6 m LIMESTONE - as above, even oil staining, slow white cut, poor to fair (3-10%) chalky porosity, micrite to dismicrite.
- 527.6 - 536.6 m See detailed core description at end of striplog.
- 536.6 - 548 m LIMESTONE - light tan to medium brown, calcilutite to calcirudite, stromatoporoid biomicrite, floatstone to rudstone, micrite matrix, tight, spotty to even oil shows, slow streaming white cut, tight to fair chalky porosity(5-8%)
- 548 - 568 m LIMESTONE - light tan to medium brown, calcirudite, stromatoporoid biomicrite, rudstone, micrite to biomicrite matrix, tight to poor chalky porosity (>5%), spotty oil shows, weak white streaming cut.
- 568 - 577 m LIMESTONE - medium brown, to brownish grey, calcilutite to medium calcarenite, biopelmicrite, packstone to floatstone, argillaceous, tight to poor porosity, (>5%), spotty to even yellow florescence, moderate streaming white cut.
- 577 - 595 m LIMESTONE - light brown tan to brownish grey, calcilutite to calcirudite, biopelmicrite to biopelsparite?, packstone to floatstone, fossil debris, strom frags, argillaceous in part, trace poor chalky & intraparticle porosity, trace fractures, no shows.

AEC (WEST) RENAISSANCE CARCAJOU P-16

- 595 - 609 m LIMESTONE - light brown tan, calcilutite to medium calcarenite, biopelmicrite, packstone to wackestone, fossil debris, argillaceous, tight to trace poor chalky porosity, spotty oil stain, ? florescence, weak white cut.
- 609 - 619 m LIMESTONE - medium to dark brown, calcilutite to fine calcarenite, biopelmicrite, wackestone to packstone, argillaceous to highly argillaceous, silty, tight, no shows.
- 619 - 621 m SHALE - dark grey, brownish, fissile, platy, slightly bituminous, slightly calcareous.
- 621-630 m LIMESTONE - medium to dark brown to grey brown, calcilutite to very fine calcarenite, micrite to biopelmicrite, mudstone to wackestone, argillaceous, tight, weak white cut, ? show.
- 630 - 637 m LIMESTONE - light brown tan, calcarenite to calcirudite, biosparite, grainstone, trace calcite fracture fill, siliceous, silty, tight, spotty florescence, slow white cut.
- 637 - 648 m Siltstone with Shale laminae & Limestone stringers:
(Hare Indian) SILTSTONE - medium to dark brown, silt to very fine Sandstone, well cemented, highly calcareous, trace carbonaceous, micaceous, argillaceous grading to silty Shale.
- 648 - 669 m Limestone with Siltstone stringers.
 LIMESTONE - light to medium brown to grey brown, calcilutite to fine calcarenite, micrite to biomicrite, mudstone to wackestone, fossil debris, pellets, silty to highly silty, argillaceous in part, trace vug/fracture filling euhedral quartz crystals, tight to trace fracture porosity, no shows.

Total Depth: Driller – 669.0 meters
 Logger – 668.9 meters

CABRA CONSULTING

1623 - 48th Avenue S.W.
CALGARY, Alberta
T2T 2S9
(403) 243-3022

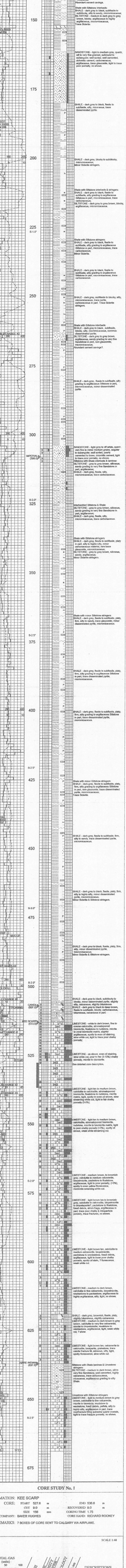
COMPANY: AEC OIL & GAS LTD WELL: AEC (MISD) RENAISSANCE 2-16 FIELD: EXPLORATORY PROVINCE: NWT LOCATION: LSD SEC COORDINATES: CD 98.4 33 ELEVATIONS: 727528.7 N KB 90.7 M WELL TYPE: EXPLORATORY SPD DATE: 2000-02-25 T.D. DATE: 2000-03-03 LICENCE NO.: 1889 CONTRACTOR: AMTA #14 MUD TYPE: GEL OIL-BM SANDPAGES: 2.5 & 5 METER INTERVALS SAGRENT: 136 to 669 meters GCLT: NONE DST: NONE

COMPOSITE WELL HISTORY DRILLING TIME LITHOLOGY LOG

HOLE SIZE	CASING SIZE	CASING DEPTH
SURFACE: 311.2 mm	SURFACE: 244.5 mm	SURFACE: 136.0 m
INTERMEDIATE: 222 mm	INTERMEDIATE: 177.8 mm	INTERMEDIATE: 508.0 m
MAIN: 159.4 mm	MAIN: 114.3 mm	MAIN: 669.0 m

REMARKS: SAMPLE QUALITY FAIR TO GOOD. CNL-GR LOGGED TO SURFACE THROUGH CASING. TOPS ARE NOT ADJUSTED TO OPEN HOLE LOGS.

CANSTRAT SYMBOLS USED FOR LITHOLOGY AND SHOWS SCALE 1:240



CORE STUDY No. 1

FORMATION: KEE SCARP			
CORE:	START 527.6 m	END 536.6 m	
	CUT 9.0 m	RECOVERED 9.0 m	
	SIZE 155 mm	CORING TIME 1.75	
COMPANY:	BAKER HUGHES	CORE HAND:	RICHARD ROONEY
REMARKS: 7 BOXES OF CORE SENT TO CALGARY VIA AIRPLANE.			

SCALE 1:48

