[redacted] COMPANY

[redacted] LOG

W-24

CF 800101

NAME W-24: NORTH FLANK OF SNOWBANK ANTICLINE ALONG KOKOLIK RIVER.

AREA OR QUAD WESTERN NORTH SLOPE STATE ALASKA

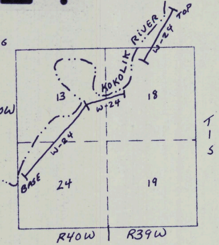
UTUKOK RIVER B-5 QUAD. 7, 18

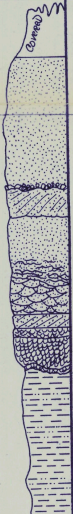
LOCATION SEC. 13, 24 TWN. 1S RNG. 39-40W

MEASURED BY K.W. SHERWOOD; C.R. WILLIAMSON, R.L. STEWARD DATE 7/77

INTERVAL KUKPOWRUK FORMATION

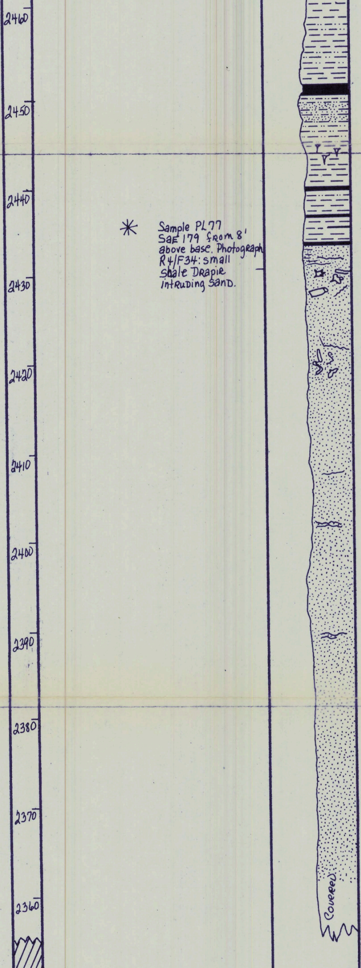
REMARKS SAMPLES DESIGNATED "SAE". CORRESPONDS TO SECTION 21 (S. FLANK OXBOW Syncline) of U.S.G.S. Prof. Paper 303.



PERIOD	EPOCH/STAGE	FORMATION/MEMBER	CUMULATIVE FOOTAGE	SAMPLES WITH LAB DATA OR PALEO DATA * = SOURCE ROCK ANALYSIS AVAILABLE	LITHOLOGY	MASTER BEDDING	PALEOCURRENT DATA	INTERVAL THICKNESS	DESCRIPTIONS
									Top of section
				Sample SAE 181 from Second sand above covered interval. PL77 SAE 181: Ø = 6.1 KMD = 0.021				15.0	Sandstone, med. to coarse grained, med. grey, weathers brownish grey, very to moderately calcareous, abundant plant Debris, base gradational with conglomerates, thin bedded, no visible stratification, top covered.
			2500						
								0.3	Conglomerate, med. grained, sand matrix and pebbles of sandstone, chert and greenstone up to 0.3 in diameter, Logs.
								19.9	Sandstone, med. grained, light grey, weathers yellowish orange, non-calcareous, moderate sorting, abundant plant Debris, erosional base, lower 4' climbing Ripples. 1.4' large scale tabular cross beds, set thickness equals bed thickness, 4' small scale trough cross laminated. 7' med. grained sandstone with erosional base, Rippled at base, upper 3.5' large scale tabular cross beds.
			2490						
				Sample PL77 SAE 180 from 1.4' thick bed of large scale tabular cross beds. Ø = 12.2 KMD = 0.35					
		↑	2480						
								26.0	Siltstone and Shale - Dark grey, at base of overlying channel there is a 1'-2' claystone bed. med. grey, weathers orange, sharp eroded top.
			2470						

CRETACEOUS

CORWIN FORMATION

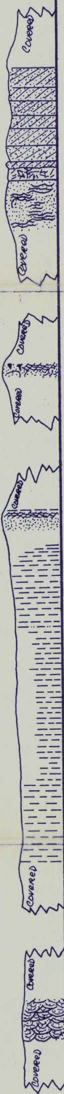


* Sample PL77 SaE 179 from 8' above base. Photograph R4/F34: small shale Drapie intruding sand.

1.5	Coal
2.5	Siltstone with Sandstone interbeds, sandstone very fine grained, abundant plant debris.
2.5	Siltstone, grey, weathers orange brown, abundant plant debris (leaves etc.) thin very fine grained, sandstone at top.
14.0	Shale, silty, dark grey, contains siltstone and coal beds, (<1' thick), top has Root structures.
70.0	Sandstone fine grained, light to med. grey, weathers yellow brown, well cemented, abundant plant debris, (leaves and stems) Ripples common, Rip up clasts, locally, top of bed at 60' from base is heavily burrowed and has heavy walled burrows, covered on Ridge and exposed only in narrow zone near River, large logs to 3'x1' and Ginko leaves at top.
125.0	Covered

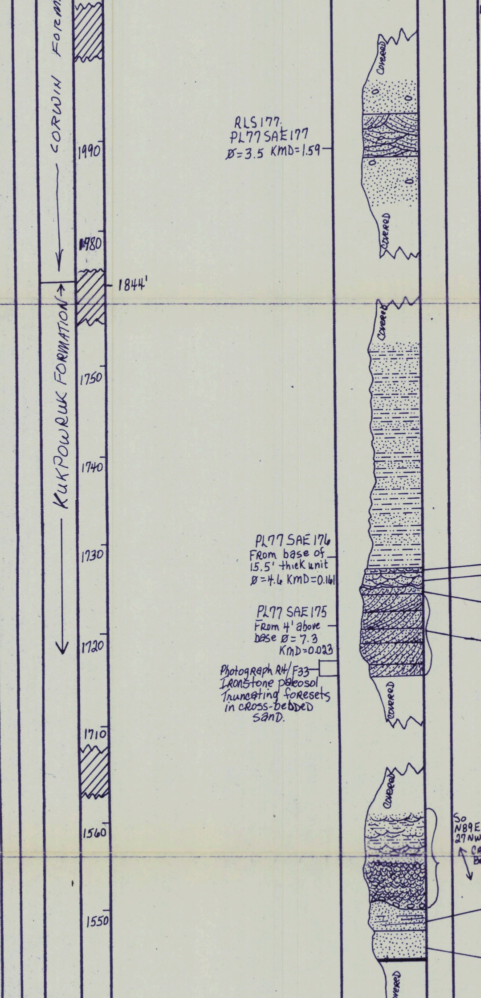
CORWIN FORMATION

2230
2220
2180
2140
2130
2120
2110
2100
2040



		13.0	Sandstone, med. grained, becoming slightly finer upward light brown grey, slightly calcareous, abundant plant fragments, base partly covered, probably sharp eroded into underlying unit, large scale tabular cross beds in sets 1.5-2' thick, uppermost 2.5' horizontally laminated, rippled at top, top covered.
PL77 SAE178 from middle of unit	N7SW 30N	1.3	Claystone, dark to med. grey, weathers orange, massive, non-calcareous, (equivalent to ironstone beds below)
		5.5	Sandstone, med. to fine grained, light to med. grey, weathers grey, non-calcareous, abundant carbonaceous material, base covered, thin bedded (0.4 - 0.1' thick), beds show faint ripples and little stratification, uppermost 1' thinly laminated with organic rich (coaly) laminae filling, low angle trough, top sharp.
		35.0	Covered
		1.5	Sandstone, very fine grained, light grey, weathers brown, non-calcareous, abundant carbonaceous material, soft sediment deformation at base, climbing ripples above with roots at top, top and base covered.
		35.0	Covered
		2.0	Sandstone, fine grained at base very fine grained and silty at top, med. grey, weathers brown, non-calcareous, abundant carbonaceous material on bedding, base covered, climbing ripples, upper 1' has no visible stratification, top transitional.
		38.0	Shale, partly covered, silty.
		60.0	Covered
		?	Sandstone fine to very fine grained, grey, weathers brown, moderate to poor sorted, small scale trough cross-laminated, very poor exposure at base, top covered.

ATION



RLS177
PL77SAE177
Ø=3.5 KMD=1.59

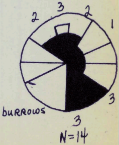
PL77 SAE 176
From base of 15.5' thick unit
Ø=4.6 KMD=0.161

PL77 SAE 175
From 4' above base Ø=7.3
KMD=0.023

Photograph RH/F33
Ironstone paleosol
Truncating foresets
in cross-bedded
sand.

40.0 Covered

14.5 Sandstone, med. grained at base, fine grained at top. Brownish grey, weathers brown, non-calcareous, abundant carbonaceous material, base and top covered, middle 5' large scale trough beds in 2' thick beds, scattered pebbles of ironstone and sandstone, no other visible stratification.



N=14

230.0 Covered, coal in ground squirrel burrows at 75' from base.

15.5 Sandstone and Siltstone, sandy siltstone in beds 0.3-1.0' thick interbedded with beds 1'-2' thick of sandstone: fine grained, med. grey, weathers tan, slightly calcareous with small scale climbing ripples throughout, bases and tops sharp, composes 70% of the unit. Siltstone: contains abundant very fine grained sand. Unit contains small scale climbing ripples and trough cross laminations which are very thin to papery, many have ½"-2" thick beds of ironstone at top.

0.2 Sandstone, top covered as 0.4 bed below.

1.8 Sandstone med. grained at base, fine grained at top, light grey, weathers brown, base sharp, small scale trough cross laminated, upper surface rippled.

0.4 Sandstone very fine grained, argillaceous, dark grey, weathers light grey, abundant carbonaceous material, small scale trough cross laminations

9.5 Sandstone, fine to med. grained, light grey, weathers yellow brown, slightly calcareous, abundant carbonaceous material on bedding, thin to med. bedded, tabular cross beds with tangential bottom sets, carbonaceous material more abundant on bottom sets than on equivalent foreset, ironstone beds of irregular thickness of 1"-1' at top of tabular cross bed sets, Paleosols (?): Strike and Dip of tabular cross sets.

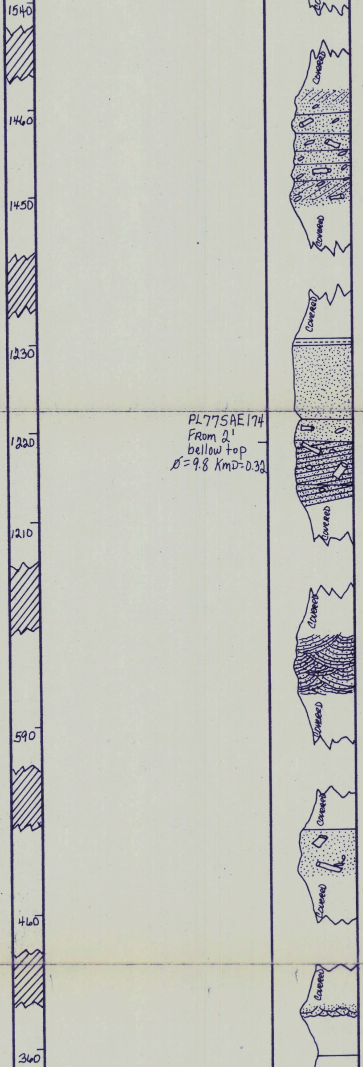
155.0 Covered, E-W, 41 North, top sharp, coal of unknown thickness 40' from base, Coal at top.

10.0 Sandstone fine grained, light grey, weathers brown, non-calcareous, slightly carbonaceous, sharp erosional base with pebble lag of ironstone, lower 4.5' contains climbing ripples in sets up to 0.2' thick. Upper 5.5' interbedded sandstone and siltstone contains small scale trough cross laminations, top covered, tabular cross beds N80E, 43NW
N42W, 05NE
Restored: N22W
S10E

3.5 Sandstone fine grained, light grey, weathers light brown, locally pebbly, pebbles of ironstone up to 3" in diameter, thin parallel laminae near base grading upward to tabular cross beds insets from 0.5-1.5' thick, top sharp

3.0 Sandstone, very fine grained, light brown, weather light grey, slightly calcareous, bedding indistinct, wispy laminations, in places appearing tabular, base sharp overlying coal, top sharp.

KVIK POWRUK FORMATION



PL77SAE174
From 2'
bellow top
Ø=9.8 KmD=0.32

82.0 Covered, Coal at top.

13.0 Sandstone, fine to med. grained, light grey, weathers orange brown, slightly calcareous, abundant plant debris ranging from silt sized to stems and branches up to 1' long, thin bedded tabular cross beds in sets 0.2-3' thick with ripples locally, floating pebbles of shale and ironstone up to 4" in length. Ironstone beds 0.5' thick at 1' from top, top and base covered.

218.0 Covered

9.5 Sandstone, very fine to fine grained, light grey, weathers very light grey, moderate sorting, very thin bedded, horizontally laminated, beds thicken upward from less than 1/2"-0.2', slightly calcareous, coaly partings, ironstone bed 0.3' thick near top, top covered.

9.0 Sandstone, very fine to med grained, poor sorted, light grey, weathers very light grey, slightly calcareous, very thin to thin bedded, large scale low angle tabular cross beds in sets 2'-8' thick, log molds, floating pebbles to 3" long of shale and ironstone, base and top covered, top sharp.

515.0 Covered, interbedded shale and coal at 430' from the base, sandstone at 440' from base very fine to fine grained, light to med. grey, roots and abundant carbonaceous material, thin bedded, indistinct wavy laminations, top and base covered. Sandstone at 470' from base med. to coarse grained, poor sorted, very friable, light grey. No distinct outcrop.

7.0 Sandstone, med. grained, moderate sorting, med. brown, weathers red orange, thin bedded, large scale trough cross beds in sets 1'-3' thick, very calcareous, top and base covered.

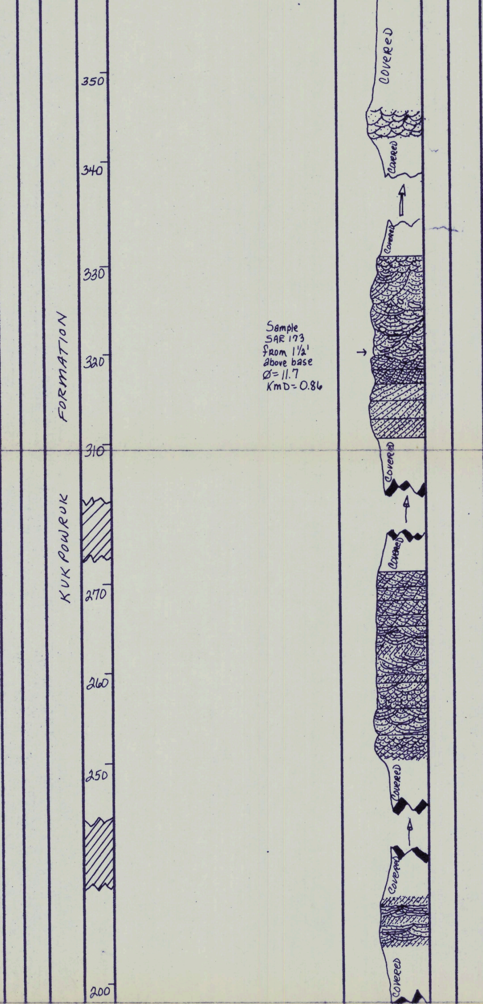
224.0 Covered, Coal bed of unknown thickness 185' from base (less than 5' thick)

5.0 Sandstone, fine grained, light grey, weathers red-orange, well sorted, quartz rich, non-calcareous, (Dollomie cement?) bedding indistinct, log molds, base and top covered.

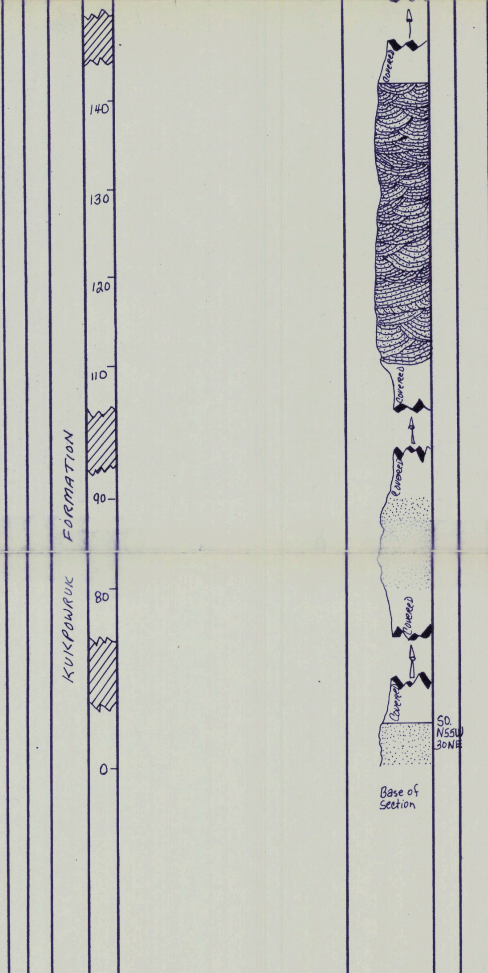
100.0 Covered

1.0 Sandstone fine grained, med. to dark grey, weathers brownish orange, very calcareous, carbonaceous material on bedding planes, small scale trough cross laminations.

4.5 Covered



13.2	Covered, break in slope with abundant coal from animal burrows.
3.5	Sandstone, fine grained, dark grey, weathers grey, non-calcareous, trace of carbonaceous material, small scale trough cross bedding, base and top covered, outcrop very rubbly.
12.0	Covered, probably sandstone and shale
20.8	Sandstone, 6' of med. grained, med. grey, weathers grey, base covered, contains large scale tabular cross beds in sets of 4' thick; local climbing ripples within foresets beds. Top transitional into 3.5' fine grained sandstone, tan, weathers brown orange with climbing ripples in pinch and swell foreset beds up to 0.2' thick, Beds thin upward into 0.5' thick interval of interbedded, thinly bedded sandstone and coaly shale, top sharp and erosional. 9.5' Sandstone, coarse grained at base fine to med. grained at top, light brown, weathers med. brown, calcareous, numerous scour surfaces with floating very coarse sandstone grains and pebbles of white quartz, black chert and shale, thin bedded, large scale trough cross bedding with climbing ripples within foreset beds, sets up to 4' thick, wood casts, 1.8' sandstone, fine to very fine grained, med. brownish grey, weathers brown orange, small scale trough cross laminations in sets up to 0.05' thick, top and bottom covered.
40.0	Covered
21.0	Sandstone, very fine to fine grained at base, becoming fine to med. grained upward, light brown to grey, calcareous, lower 3' contains climbing ripples in sets up to 0.2' thick, next 3' contains large scale low angle trough cross beds in sets up to 1.5' thick. Overlying 1.5' is thin bedded with climbing ripples, middle 7.5' contains large scale low angle trough cross beds in sets up to 0.4' thick, abundant wood and carbonaceous material, Upper 6' contains very fine to fine grained sandstone with climbing ripples and roots, Base and top covered.
40.0	Covered
6.8	Sandstone, fine to med. grained, light brown, moderately sorted, thin bedded, horizontally (?) laminated in sets up to 0.5' thick, very calcareous, top and base covered.



63.0	Covered
13.5	Sandstone, fine grained, light grey brown, thin to med. bedded (½"–½'), large scale low angle trough cross bedding with ripples, including climbing ripples on slide faces of cross bedding, non-calcareous, minor. carbonaceous material, latteral suggestion of channels (3'-5' thick), top covered.
18.5	Sandstone, fine to med. grained, light brown, slightly calcareous, base covered, thin to med. bedded (0.1'-0.7'), low angle, large scale trough cross bedded, top transitional.
20.0	Covered
EST 5'-10'	Sandstone, fine to med. grained, light brown, dispursed flecks of carbonaceous material, non-calcareous, indistinct exposure, top and base covered.
75.0	Covered, 45' from base of covered interval there is an indistinct exposure of fine to med. grained sandstone with small scale trough cross laminations.
EST 5.0	Sandstone, med. grained, light brown, weathers light brown, non-calcareous, horizontal (?) lamination, base and top covered.