W-13

AMOCO PRODUCTION COMPANY

SURFACE LOG

CF 800101

NAME W-13: NORTH FLANK OF KUKPOWRUK SYNCLINE ALONG KUKPOWRUK RIVER.

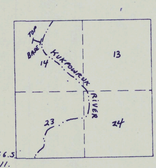
AREA OR QUAD POINT LAY A-2 QUAD. STATE SLOPE, ALASKA

LOCATION NW/4 SW/4 NW/4 SEC. 14 TWN 3S RNG 45W

MEASURED BY K.W. SHERWOOD, C.R. WILLIAMS, A.L. STOUT DATE 7/77

INTERVAL KUKPOWRUK FORMATION

REMARKS SAMPLES DESIGNATED "KKS". MEASURED ON SUBMARGINAL EXPOSURES IN LOW BLUFF ON WEST SIDE OF KUKPOWRUK RIVER AT LOCATION SHOWN IN MAP. CORRESPONDS IN PART TO USGS SECTION #6, CHAPMAN & SABLE, PROF PAPER 303, PL. 11. ALSO SEE PHOTO R2/F13 IN PHOTO ALBUM.



Plotted by Beth King

PERIOD: CRETACEOUS

EPOCH/STAGE: ALBIAN

FORMATION MEMBER: KUKPOWRUK FORMATION

CUMULATIVE FOOTAGE

SAMPLES WITH LAB DATA OR PALEO DATA

LITHOLOGY

MASTER BEDDING

PALEOCURRENT DATA

INTERVAL THICKNESS

DESCRIPTIONS

*SOURCE ROCK ANALYSIS AVAILABLE

COVERED

Corresponds approximately to 800' on Chapman & Sable Section 7.

6.0 Shale, clay dk. gray, organic-rich.

RLS-25; PL77 KKS-25 P=5.0 Kmd = 0.016

RLS-24; PL77 KKS-24 P=4.7 Kmd = 0.0029

Photograph R2/F9 Prodelta shales sands grading upward into channel-mouth bar sand - truncated at top by channel sand.

6.1 Sandstone, fg mod. well sorted. Sharp erosional base; cut as much as 2' relief. Asymmetrical upper contact. Lg-scale trough x-lamination (2-4 sets). Cgl lag at base of SS. pebbles and wood fragments up to 8" dia. Thick bedded.

2.2 Sandstone, f-med g. mod. sorted. Thin-bedded, w/ripples above + flat/pl. lam. and small-scale trough x-lam. Base transitional.

17.4 Shale, clay dk. brn-gy, organic-rich, Possible 1' thick silty S.S. bed near center - partly covered.

Trough x-strat

Ripples

RLS-23; PL77 KKS-23 P=6.7 Kmd = 0.0105

RLS-22; PL77 KKS-22 P=4.9 ; Kmd = 0.0097

RLS-21; PL77 KKS-21

Photograph R2/F10

R?/F?

9.5 Sandstone, fg mod. well sorted. lg-scale trough cross-stratification (1-3 sets) 15-20° dips, flow to north. Abundant wood fragments and plant material concentrated at base. Thinner bedded near top.

8.5 Sandstone, fg mod-sorted. Mostly lg-scale trough x-strat w/a few zones of ripple marks. 3 deposition surfaces several ft. thick are defined by laterally discontinuous shale partings. Surfaces dip nearly due North @ 20-25°.

5.7 Interbedded silty S.S. and siltstone S.S. is vfg, poorly sorted. Percentage of S.S. increases upward. Coaly seams in shale. Low angle trough x-strat and horiz.-lam in S.S.

12.7 Sandstone, f-med grained, tr. gr. lg-scale trough cross-strat (2-3 sets), erosional basal contact. Logs up to 1' dia. near base. Upper contact not exposed.

RLS-17; PL77 KKS-17 P=3.8 Kmd = 0.0089

RLS-18; PL77 KKS-18

32.8 Shale, clay, organic-rich, dk gr-partly covered interval.

Photograph R2/F8 Distributary channel sand. Scouring thinly laminated and cross-laminated sands (TIDAL FLAT ?)

RLS-20; PL77 KKS-20 P=3.1 Kmd = 0.0038

RLS-19; PL77 KKS-19

3.3 Sandstone, silty v.f.g. poorly sorted dk gr. Thin-bedded linear ripples at top, erosional base w/load structures (near rounded current) 3cm-scale trough x-lam. well developed base shows transition into Shale interbedded Shale & siltstone. Abundant plant material.

8.5 Shale, clay, dk-gray.

4.4 Sandstone, silty, vfSS, poorly sorted, dk-gray. Small-scale trough cross-lam, mtrs+ centered bedding. Transitional downward into Shale base covered.

47.7 Shale, clay, dk-gray, organic-rich, fissile.

No. of measurement

Linear current ripples

1.5' Sandstone, fg, well-sorted, low angle cross-strat. (8' sets), linear ripples at top, erosional base w/load structures.

1.0' Shale, dk gray.

3.0' Sandstone, silty, coarsens upward to fg. Thin-bedded, climbing ripples, coal detritus.

0.5' Shale.

2.0' Sandstone, silty vf coarsen upwards, iron-rich, Thin-bedded rippled, w/distinct root casts upper 8".

2.0+' Shale.

CREEK BED

corresponds approximately to 270 on Chapman + Sable Section 7.

Generalized S.S. Sequences & Probable Interpretations

Shale

Sandstone — Erosional base, lg-scale troughs (1-4' sets). Coal lag at base. Probable DISTRIBUTARY CHANNEL. May cut completely into prodelta. Troughs dip to north.

Erosional

Progradation

Sandstone — Transitional base. Thin-bedded, horizontal laminations, linear current ripples at top and rounded crests. Some bioturbated. Interpret small-scale trough cross-lam. cut & fill (?) and lg-scale trough tabular sets. Probable DELTA FRONT-CHANNEL MOUTH BAR SEQUENCE. Sands are well reworked and show effects of longshore transport. SS may show lg-scale bar separation within Shales separating Sandstone beds.

Siltstone

Shale — Thin beds may be probably sheet flow events with horizontal lam, burrowing, ripples. Probable DISTAL BAR FACIES? Shows abundant plant fragments.

Organic rich, clay Shale - no observed mega Fossils. Probable PRODELTA.

Shale, coaly, organic-rich, dk-gray-blk, silty shale. DELTA-PLAIN FLOOD BASIN OR INTER DISTRIBUTARY BAY.

Sandstone - Transitional base over short interval. Sandstone - coarses upward, cross-side bedded (ripple) and climbing ripples (type A cross-lam) with coal stringers. Horiz lam. Sharp upper contact with coal. Lesser-horiz lam. Sharp upper contact in upper 8" S.S. Some dipping vertical root traces in upper 8" S.S. Probable CREVASSE SPLAY into Delta Plain lake or interdistributary bay.

Shale, Dk organic-rich, bioturbation.