CF75 0040 0001

Amoco Production Company

Surface Log

Name BILLY CREEK SECTIONS NO 1 & NO. 2

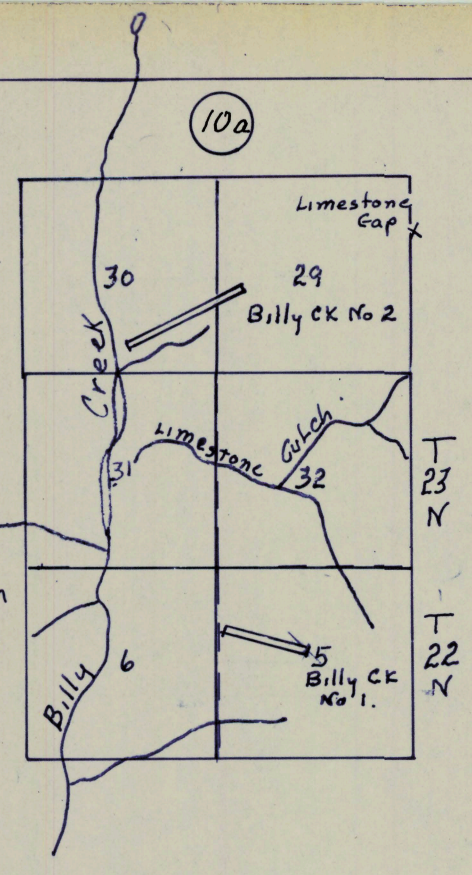
QUAD OR AREA TALKEETNA MTNS (A-2) **STATE** ALASKA

LOCATION S/2NW Sec 5 TWN 22N RNG 10E SM; NW SW Sec 29, NE SE, SW SE Sec. 30 TWN 23N RNG 10E SM

MEASURED BY C.L. CONRAD & D.W. ENGELHARDT **DATE** 6-26-63

INTERVAL LOWER CRET-NELCHINA FM & UPPER JUR-NAKNEK FM

REMARKS SECTION IS CONDENSED FROM ORIGINAL 1"=10' SCALE SECTIONS & NOTES. THIS SECTION IS IN SAME AREA AS S.J. RULLA 60-R-27 SECTION, 1960



PROJECT # 501-1-1,
SECTION 63-DE-30 is Billy CK No 1 (LOCALITY 1520)
63-DE-30B is Billy CK No 2 (LOCALITY 1515)

△ Indicates Sample Cut for Source Rock Analysis.

PLOTTED BY JDP

PERIODS: CRETACEOUS; JURASSIC

EPOCHS: LOWER CRETACEOUS; UPPER JURASSIC

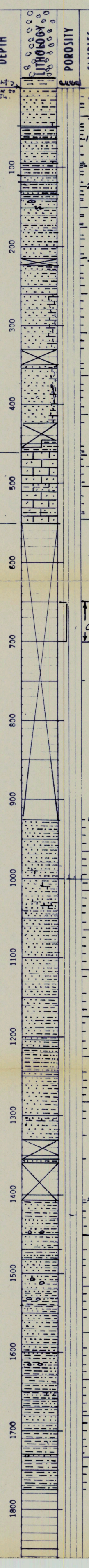
GROUP OR FM: NELCHINA FORMATION; NAKNEK FORMATION

MEMBER: UPPER SANDSTONE

AGES (Stages): LIMESTONE; HAUTERIVIAN; KIMMERIDGIAN

FOSSILS: Loc. 7778 Buchia rugosa Tancredia; Loc. 7778 Buchia rugosa

CORES / SHOWS / DEPTH / LITHOLOGY / POROSITY / SAMPLES



DESCRIPTION

@100' mass CgL-prob. Tertiary

Coal, BLK, 8-10" undulain by sh, blk fiss, loc. across Gully, so side of fault. Poss. L. Cret. Matanuska Fm

SS, Arkose, med gr-gy, vf-mg, SE, Sa, qtz, felds, Ign Rx, biot, horn in yell clay-bent tuff matrix, v/angl, Fri, Appear mass.
aa v/Lig, plant frags
hd. calc, x-bdd basal 4', westerly flow direction + wave ripples

Mudst. dk olive bro, silty, Med. hd, fri, bec. sdy at 55' & carb plant frags at 60'
SS, dk-med gy vf-mg, ArK, sa-occ'l Rd. qtz, chert feld. s/ign. cons. sh biot, chlorite in matrix, Loose fri, basal 1½' Calc. ss aa, Lig, micro-cgl. to Scat Rd C.g.

Mudst, olive brn, silty, Mic, Lig, plant frags bec. Sdy at 101' occ'l f-mg qtz
SS, dk grn-gy, vf-v/cg, v/angl, ArK, fri, occ'l plant frag.
Mudst OL-gy to gry-bro, v/silty, fri, Lig w/thin bed dirty angl ss & siltst, carb.
5' ss, dk gy-blk, vf-fg, angl & 5' mudst, aa blky & platy
SS, dk gy-blk, vf-fg sa, v/angl, L, 2' mudst Lense at 142', hd, calc
contorted beds at 150', s/gy mudst int bd @ 155', 2" silty mudst @ 161

GENERAL LITH SPLE

SS, aa dk gy-blk, vf-fg, v. angl, ArK, biot. Mic, chl. v/ang. glass shards & tuff poorly exposed
CVD by slump.

SS, dk gy-grn-blk vf-mg. sa-sr v/angl, Mica, ArK. fri, Appears Mass v/silty & shy at 240-241 Lig, fri.

SS, aa, Calc, forms resist. beds, hd, dense w/calcite along fracs.

SS aa vf-fg
CVD by Talus, Tundra & slump.

CVD by talus from above SS

Mudst, Olive-gy, Silty, soft, Abund Inoc. Prisms, Top Mudst prob at 445'
LS, Lt gy, f-xln, bioclastic, loaded w/ Inoc. Prisms, v/sdy, Mass, wxs Med gy-buff. Forms vert. Cliffs. Glauc. at 470' + qtz, chert, Mic bec. more sdy at 500' & most of LS of Inoc. prisms.

2' Mudstone at 503-05, foss,
LS, Lt gy-Lt bro, f-mxln aa. w/20% sr frags qtz, chert, glauc, mica Mass. sli to stg petroliferous odor & fresh break. Forms Cliffs v/sdy at 545' (30% sd), 2' Mudst 536½-538½.
Base of LS @ 550' CVD. Sharp flattening of slope 550-565 appears to be sh unit.

Mudst, olive-gy, soft, foss. silty, sdy poor exposed. CVD by Talus & slump:
End of Sect^N at 570 - Rubble CVD & ? faulted. continued measuring below LS at 63-DE-30B Loc @ 2 miles No. Started Sect^N - base LS. Strike N 45° W Dip 19° NE. From 0'-375'
~~CVD w/Talus & slump. Appears to be a Loose Friable ss.~~

SAMPLES W/ PREFIX CR TAKEN AUG 4, 1974 AT BILLY CK NO 1 SECTION. HVY TALUS SLOPE BELOW NELCHINA LS. FAULTING IS PROBABLE AS NOTED ABOVE.

@ 100-150'± below LS. SS Mass, fg s/yell-bro Fe stn M-Cg discontinuous ss lenses, Appears X'bed, Trs. carb wood frags. ? L. KNSS. fair poro.
50'± SS wxs Olive-gy, f. m. & cg, s/Lensing of pebbly beds, s/scour & fill struct. fining upward. mass forms Hoodoo like Cliffs, Soft, fri, X bd. Low L to ? hi Angle. SSW flow direction
at 200'± v/foss, Abund Coquina beds 1" to several feet thick.

* Sple CR-115F Collected at 400'± below LS at No 1 Billy CK from Coquina beds in soft shly ss.

SS, shly, med-gy-grn-gy, vf-fg, sa-a, v/angl, silty, Mica, biotite-Chlorite, clay matrix, slabby, v/fossil wood & plant frags, wxs dk bro, calcite filled fracs.

SS, aa, more argil, fiss, shly, hi carb. fewer Pelecypod shells v/mic

SS aa, vf-cg silty, a-sa, mic, v/shly. w/occ'l Calc lens, & Nodules, mass, v/fossil, Lignitic

SS, aa, abund. fossils
SS, aa w 6" bed of shells, Lenticular Coquina
SLtst, olive-gy, sdy, shly lam, dk gy-blk, v fiss-blky (2' bed)
SS, shly, aa v/foss, v/carb, mic, mass
6" Limy ss bed.
SS, shly aa, dk olive-bro, more Mic, platy, fass.

SS aa, Coarser grd vf-fg
SS, olive-gy, ark, f-cg, sa-a, qtz, chert, dk Rx frags, mic, felds in zones fossil, wxs Lt. olive gy
Excell fossils

SS, shly, aa, vf-mg, v. angl, ARK, fossil, carb, mic, soft, fri.

SS, shly aa vf-fg, inc shly.

SS, aa bec. more fg, hd, mass grade to sdy Mudst
Mudst, dk olive-gy, sdy, silty foss. L carb w/plant frags, mass.

SS olive-brn - Red bro vf-fg, a-sa, qtz, felds, cht, ark, mic, shly v/angl plant frags, X-bdd, mass, loose, fri, Limonite stn

SS, aa, olive gy, Less Fossil, more Indurated, Greasy Appear.

2' Coquina bed of Pelecypods in ss aa

CVD by slump & Tundra s/poss isolated otc in streambed.
SS, aa

Prob top of U. Jur. Naknek
Argil; med gy, w/well rd qtz & cht grns. v/hd, dense prob silic, ? calc, mass.

SS, Lt gy, vf-mg, sr-rd in Clay matrix, v hd, silic, platy
Mudst, med-dk gy, silty, v hd, silic, mass, blocky w/dk gy, occ'l pyrite Nodules
SS, arkosic, med-gy-olive gy f-vcg, qtz, cht, felds, mic. clay & slt matrix, mass, frac. hd-loose, fri resembles - L. Nelchina sd. bec. pebbly at 1445'-50 & v/shly & v/mic at 1450'.
Argillites to Mudst, silty, sdy to Thin ss
Arkose & SS, Lt grn-gy c-vcg, sa-a, wh, qtz chert felds, mic. chl matrix Mass, fri becomes quite shly & pebbly at 1505', Lam. of dk gy sh at 1515' & silic argil at 1525

Argillite med. dk gy, hd, mass. blocky pyritic
Arkose, Lt olive gy, m-vcg, pebbly sa, qtz, cht, ign Rx, mic, horn, clay Matrix, fri to hd. at 1555' bec. f-mg.
aa, f-cg argil, fri, mass, fossil. lf.
Mudst, olive gy-gy w/f-c scat qtz grns. mic, ark, frac-calc fill 1' bed Arkose at 1600', & ark, w/cht pebbles, c-vcg at 1614
aa bec. less sdy & more silty at 1625', hd. blocky dense
aa. grn-gy silty, mass. ½' bd Calc ss vf-fg at 1655'; 8" bed ark at 1667

SS. aa vf-cg, bec ark at base
mudst, mass. occ'l nodules
4' Arkose, olive gy f-vcg, qtz, biotite, cht w/rd pebbles, purp. qtzite
Mudst, dk grn-gy w/scat xls hornbl & ang grns felds & qtz (Arkosic mudst) Matrix, gy-grn silty clay, Mass bd'd v/hd silic, wxs med gy.
End of sect^N in CK btm. CVD by Tundra veg to Billy CK