Amoco Production Company

Surface Log

Name CALICO BLUFF SECTION

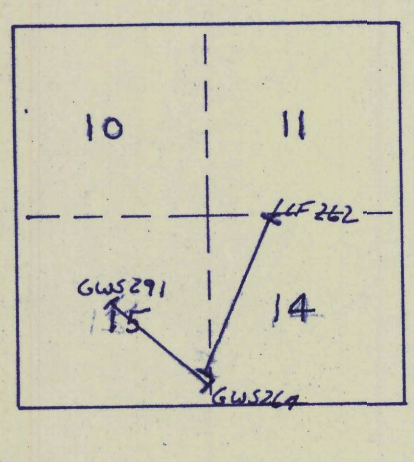
COUNTY _____ **STATE** Alaska

LOCATION ____ °N ____ °W Sec. 14-15 **TWN** 1N **RNG** 32E

MEASURED BY L. Furer, B. Fehlmann, C. Harrison, A.Ormiston, G.Self **DATE** 8/10/71

INTERVAL Ford Lake Shale - Calico Bluff

REMARKS Measured Ford Lake Sh. along the Yukon River in Sec. 14. Measured the rest of the section up SW face of the Bluff.



ang. Cret.

Sta 109 (Brabb reports 1000' sh & cht - pebble cong)

Leonard(?)F

Covered on top Bluff

Latest Miss.

GWS291F — ~~Shale, as below~~

GWS290FCf — Shale as below interbedded w/very silty packstone-wackestone-micrite, weathers yellow crinoids, bryzoans, brachiopods

Covered

GWS289PSrCF — Shale, dk gry, fissile interbedded w/silty shale as below.

100

GWS288PSr

GWS287FCf — Ls, micritic, dk gry, weathers yellow, interbedded w/silty shale as below

Shale, dk gray, silty

200

indet. GWS286FCf — LS, gry-brn, finely crystalline, med bedded, trilobites, brachs, crinoids

Ls, dk gry, finely x-talline, slight fetid odor, argillaceous, interbedded w/ siltstone & shale, v thin bedded, clams present.

Shale as below.

GWS285PSr

300

GWS284FCf — Interbdd. crinoid pkstn & silty sh, thinbdd dk gry. Ls weath. lgt gry

indet. GWS283FCf — Phosphate sd grns. at base of some Ls beds

GWS282FCf

indet. GWS281F — Silty shale and shaly silt w/some f-grnd sd. Dk gry, fissil sh.

E. miss GWS280P

(?) 400 GWS279FC — Ls, dk gry, finely crytalline, weathers lgt gry. GWS279=USGS-61ABA-1451B

Ls, sh. & siltstn. interbedded. Ls is crinoidal wackestn, lgt gry, silty. Abnt. byzoans, some brachiopods. Ls. beds are lenticular. Worm burrows are present in siltstn. Ls lenses decrease in number upward. GWS-277=USGS-61ABA-1451D

Chester GWS278FC — Brachiopods-trilobites, and crinoids

GWS277FCf — Ss, qtzose w/some cht. pebbles, crinoidal, x-bedded, interbedded w/sh. ab, Ss is lgt gry

500 GWS276FCf — Shale, dk gry, silty

Siltstone, shaly, dk gry, weathers yellow & brown, pyritic

GWS275P — Shale, dk gry, v. silty, nearshore marine

E. miss. — Ls, crinoidal pkstn, th. bedded, channel cutting, fines upwards, stg petro odor

indet. (?) GWS274FCf — Sh, dk gry, v slty, non-calc., minor pods of crinoidal sd. GWS-274-USGS61ABA-1891A

GWS273FCf — Interbedded crinoidal packstone & shale. Ls beds up to 1½" thick

indet. 600 GWS272FCf — Interbdd micrite, sltstn&sh w/a th layer of cht. peb. & clastic ls. at top of unit

GWS271P

Chester GWS270FCfF — Ls, mas. crinoidal wackstn, abund rugose corals-vesiculophyllum?, brachs dk gry

GWS269FCf — weath. lgt gry. GWS270=USGS-61ABA-1891C

GWS268FCf — Interbdd & interlaminated micrite & calcar. slty sh, th bds at base, becoming thicker upward. Crin. & clas. lens.

Late Mer or Chest GWS267P — Shale, dk gry, platy burrowing

GWS266FCf — Ls, crin. wackstn. bryzoans, brachs, pods/qtz&cht. sd&peb. grns. Some calc, blk sh present

Meramec GWS265FCf — Shale, calc. dk gry, weathers platy

700 — Ls, crin. pkstn, lgt gry, sh clasts, x-bedded, channeling, trilobites, corals

GWS264P — Mudstn. v calc., w/streaks & pods of crinoidal pkstn, dk gry, thbdd, shaly breaks strong petroliferous odor

Inaccessable-mostly lgt brn wea. silty ls. w/thin dk gry sh.

LCF278CfF — Ls, med. tan-gry, f-g, wackstn, foss. frag.-crinoid(?), ~~silty interbedded w/dk gry~~ blk. sh.

Inaccessable-interbed dk. gry sh. and silty ls.

800 — Inaccessable-interbed dk. gry sh. &dk. gry slty ls, weas. brn, interbed, dk gry sh & gry v slty ls w/f-g fossil frag.

indet. LCF277CfF — Ls, dk gry, wea. lgt. gry, crinoidal pkstn, massive, few th. strks blk sh.

Calico Bluff LCF276CfF — Ls, tan-gry. wkstn, sdy, cht pebs, base ls crin., bryozoans, th. lam. dnse. tite w/th interbds, dk gry sh gives chara white-block banding

USGS Osage LCF275F — Sh, blk, calc, w/th limy layers w/colonial corals, peley, brachs, ls nod. Top/unit

Ford Lake Sh. LCF274P — worm burrowed

Osage LCF273FCfF — Ls, dk gry cht grns, crin. wkstn-pkstn, abnt rugose corals, peley, brzo, gast, fines upwd

Sh slty&limy slty sh, crin, peley, float w/brachs, cephslopods, petroliferous odor

Sh blk silty

indet. LCF272FCfF — Siltstn, dk gry, w/th(1')layers dk gry slty ls, crinoidals, packstn.

1000 LCF271PSr — Siltstn, dk gry

Interbed dk gry siltstn & dk gry sh wea. brn.

indet. LCF270FCfF — Ls, dk gry slty, crin. pkstn-wkstn, fenest&strk bryoz, brachs(?)cht. pebs, sh. dk. gry.

Prob Kinderhook LCF269F(Float) — Sltstn, med-gry, calc, interbd w/dk. gry. sh. w/th beds slty ls(Pecten clams in float)

LCF268F

E.Miss(?) LCF267PSr — Siltstn, dk gry wea. lgt. brn, pelecypods, petroliferous odor

Sh, dk gray-blk.

E.Miss(?) LCF266PSr — Sh, dk gray-blk, unident. clam, nearshore marine

1200 Sh, dk gray-blk.

Sh, aa

Sh, au

Late Dev. (Frns.) LCF265P — Sh, dk gry w/abdt interbeds siltstn w/lge blk conc in siltstn (iron or manganese)

1300

Famen. LCF264P — Sh, dk gry w/th. siltstn layers, siltstn. conc. poss. goniatite frag. in concre.

Late(?) Dev 1400 LCF263PSr — Sh, dk gry, w/thin beds dk gry siltstn, sli. sandy, nearshore marine

Late (?) Dev. LCF262P — nearshore marine

1500

Covered below

Calico Bluff Section

1600

The Ford Lake Shale and lower part of the Calico Bluff Formations were measured at excellent exposures on the west bank of the Yukon River. The remainder of the Calico Bluff Formation was measured on the southeast end of Calico Bluff. The Ford Lake Shale is basically dark shale with many thin interbeds of dark gray shaley siltstone. A few thin crinoidal packstone-wackestone beds occur in the upper part of the Ford Lake Shale and the upper boundary is transitional with the overlying Calico Bluff Formation.

1700

The Ford Lake Shale is a nearshore marine sequence of both Late Devonian and Early Mississippian age. It becomes more marine at the top of the section. The Late Mississippian Calico Bluff Formation is predominately dark shale and silty shale with abundant thin silty limestones. There are also a few thin siltstones and sandstones. The limestones vary from micrites to packstones.

1800

This sequence contains an unusual mixture of features - some suggest very shallow-water deposition (e.g. channelling, x-bedding, broken fossils), others are indicative of deeper water conditions (eg. thin even laminations, dark shale, bryozoans). It is likely that this is a bank to bank slope deposit, and wave and current action over the bank has carried bank material to deeper water, at times. Neither of these formations have reservoir potential, however, they do contain abundant shales with rich hydrocarbon generating capability.

1900