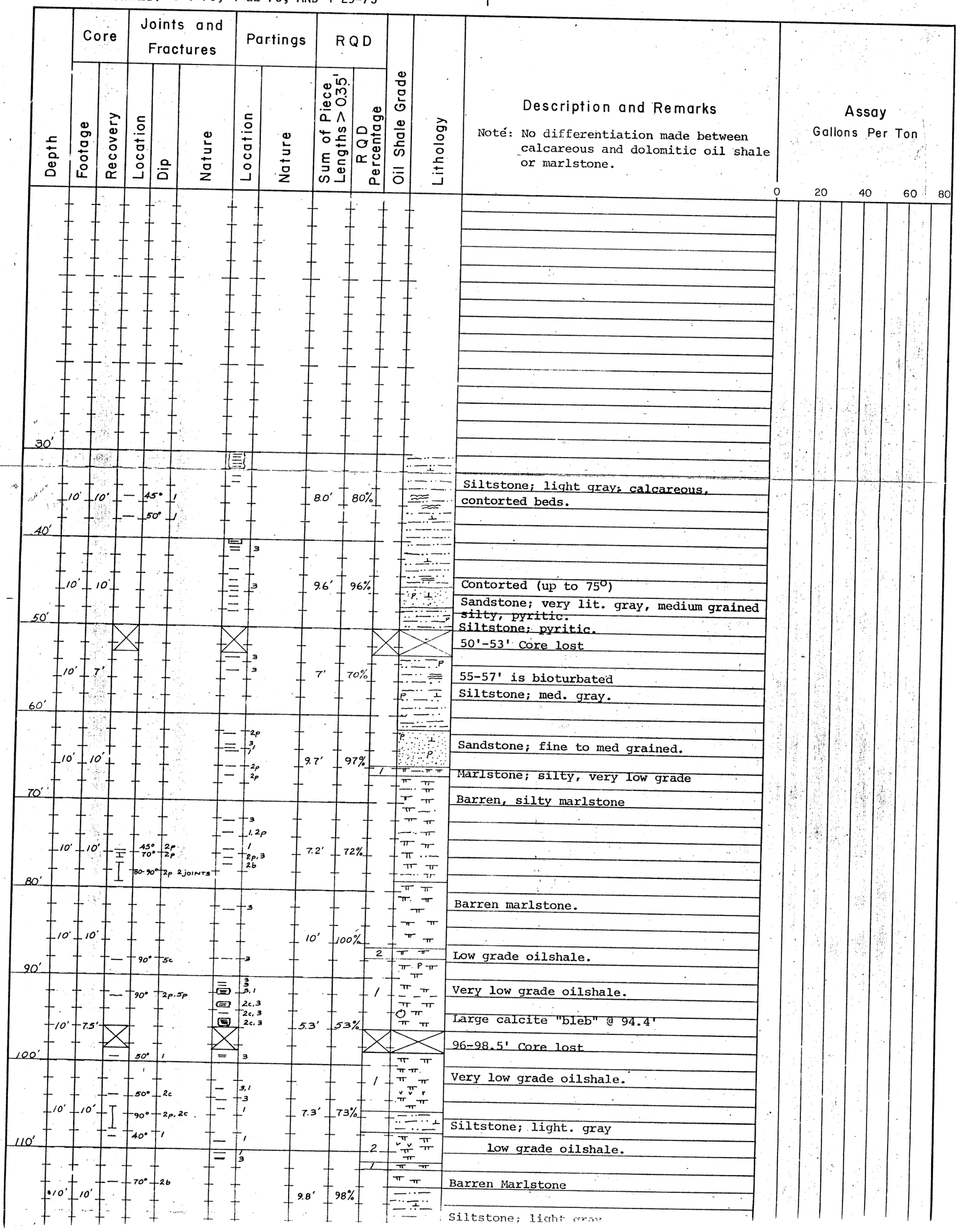
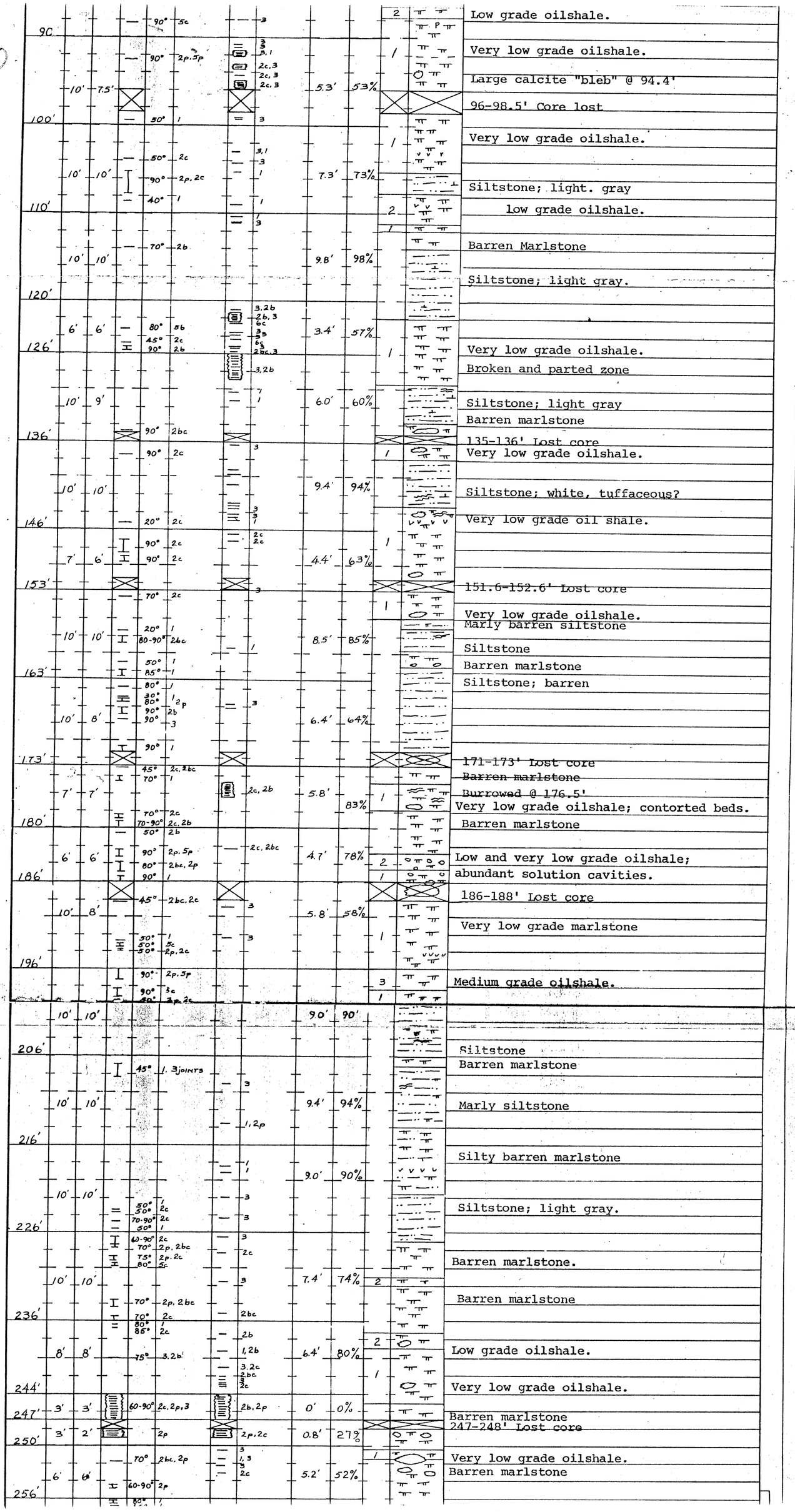
C-439 (a)

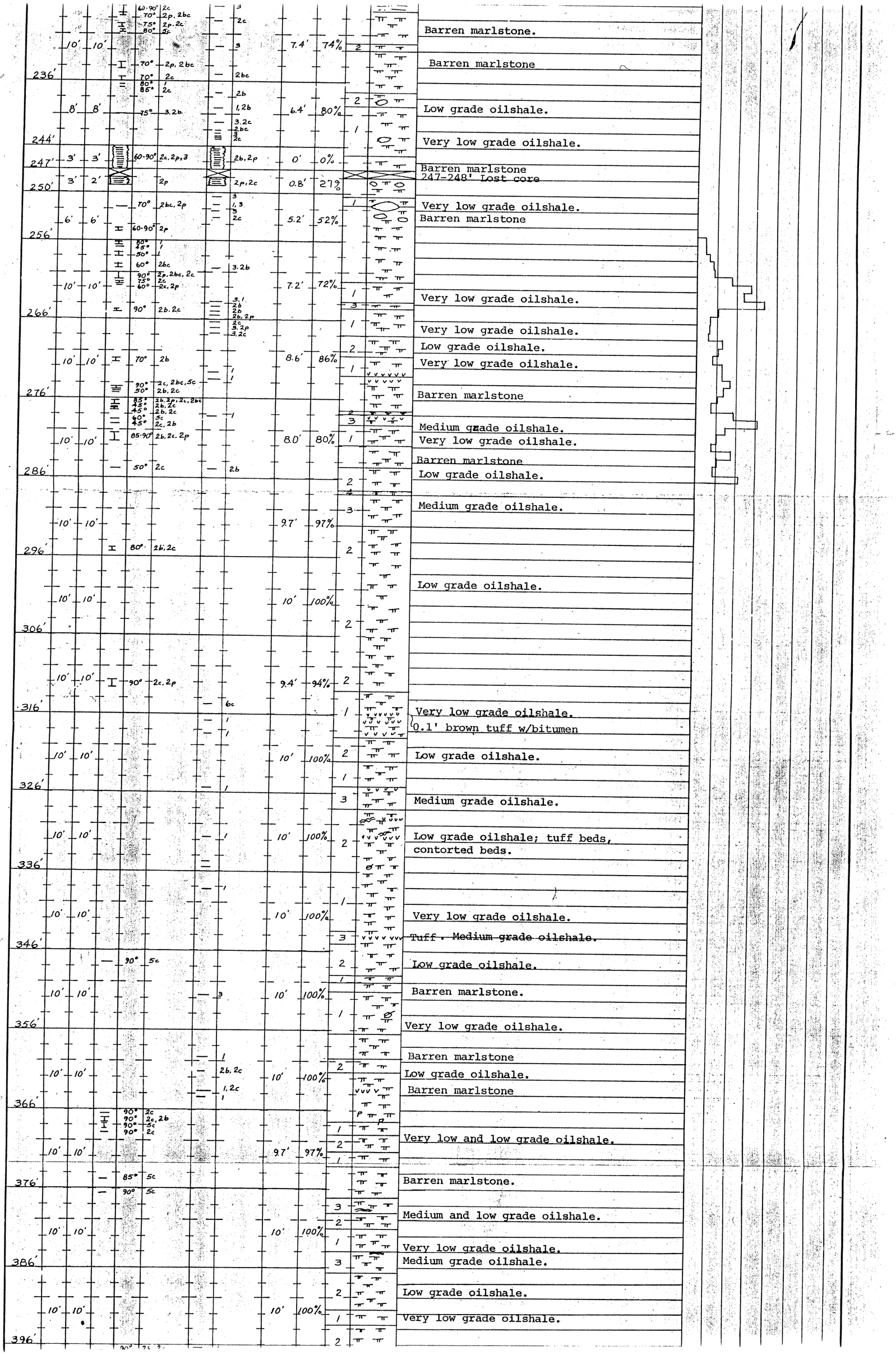
GEOLOGIC AND ROCK STRUCTURE LOG

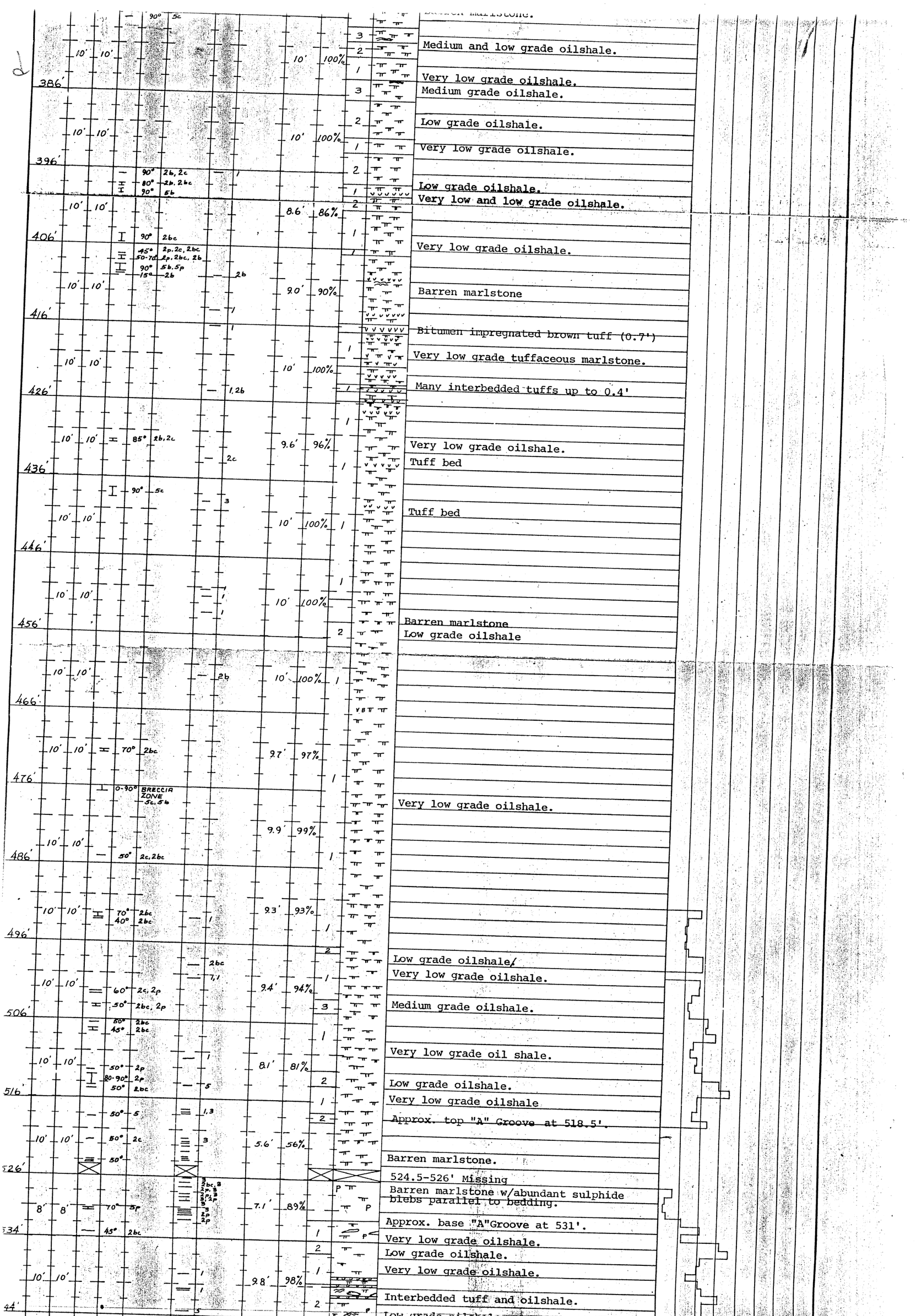
COMPANY: UNION OIL COMPANY OF CALIFORNIA
CORE HOLE: OM 5-74
LOCATION: APPROX. 2300' FSL AND 1430' FWL, SEC. 2, T6S, R96W.
N 636, 151' AND E 1,272,237' BY COLORADO STATE COORDINATE SYSTEM
CORE SIZE: NX
ELEVATION: 7891'
DESCRIBED BY: CLARDY AND ABRAHAMSON
DATE DESCRIBED: 3-3-75, 4-22-75, AND 4-29-75

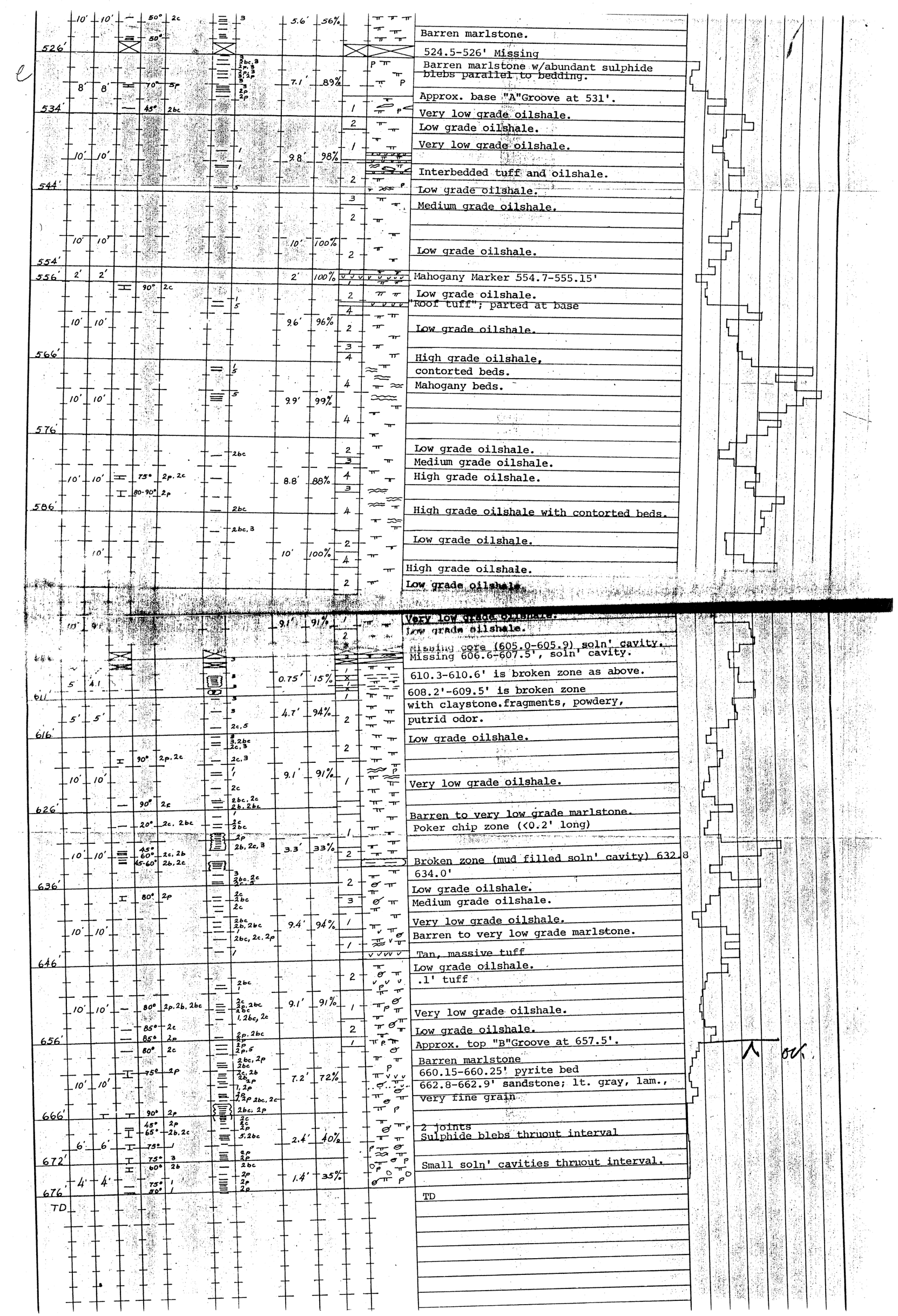
MARKER BED:	DEPTH	ELEVATION
Top "A" Groove	518'	7373'
Base "A" Groove	532'	7359'
Mahogany Marker	554.7'	7336.3'
Top 60' Mine Zone	559'	7332'
Top "B" Groove	657'	7234'
Base "B" Groove	DID NOT PENETRATE	




Low grade oilshale.
Very low grade oilshale.
Large calcite "bleb" @ 94.4'
96-98.5' Core lost
Very low grade oilshale.
Siltstone; light. gray
low grade oilshale.
Barren Marlstone
Siltstone; light gray.
Very low grade oilshale.
Broken and parted zone
Siltstone; light gray
Barren marlstone
135-136' Lost core
Very low grade oilshale.
Siltstone; white, tuffaceous?
Very low grade oil shale.
151.6-152.6' Lost core
Very low grade oilshale.
Marly barren siltstone
Siltstone
Barren marlstone
Siltstone; barren
171-173' Lost core
Barren marlstone
Burrowed @ 176.5'
Very low grade oilshale; contorted beds.
Barren marlstone
Low and very low grade oilshale;
abundant solution cavities.
186-188' Lost core
Very low grade marlstone
Medium grade oilshale.
Siltstone
Barren marlstone
Marly siltstone
Silty barren marlstone
Siltstone; light gray.
Barren marlstone.
Barren marlstone
Low grade oilshale.
Very low grade oilshale.
Barren marlstone
247-248' Lost core
Very low grade oilshale.
Barren marlstone


Barren marlstone.
Barren marlstone
Low grade oilshale.
Very low grade oilshale.
Barren marlstone
247-248' Lost core
Very low grade oilshale.
Barren marlstone
Very low grade oilshale.
Low grade oilshale.
Very low grade oilshale.
Barren marlstone
Medium grade oilshale.
Very low grade oilshale.
Barren marlstone
Low grade oilshale.
Medium grade oilshale.
Low grade oilshale.
Very low grade oilshale.
0.1' brown tuff w/bitumen
Low grade oilshale.
Medium grade oilshale.
Low grade oilshale; tuff beds,
contorted beds.
Very low grade oilshale.
Tuff. Medium grade oilshale.
Low grade oilshale.
Barren marlstone.
Very low grade oilshale.
Barren marlstone
Low grade oilshale.
Barren marlstone
Very low and low grade oilshale.
Barren marlstone.
Medium and low grade oilshale.
Very low grade oilshale.
Medium grade oilshale.
Low grade oilshale.
Very low grade oilshale.
236'
244'
247'
250'
256'
266'
276'
286'
296'
306'
316'
326'
336'
346'
356'
366'
376'
386'
396'


Medium and low grade oilshale.
Very low grade oilshale.
Medium grade oilshale.
Low grade oilshale.
Very low grade oilshale.
Low grade oilshale.
Very low and low grade oilshale.
Very low grade oilshale.
Barren marlstone
Bitumen impregnated brown tuff (0.7')
Very low grade tuffaceous marlstone.
Many interbedded tuffs up to 0.4'
Very low grade oilshale.
Tuff bed
Tuff bed
Barren marlstone
Low grade oilshale
Very low grade oilshale.
Low grade oilshale/
Very low grade oilshale.
Medium grade oilshale.
Very low grade oil shale.
Low grade oilshale.
Very low grade oilshale
Approx. top "A" Groove at 518.5'.
Barren marlstone.
524.5-526' Missing
Barren marlstone w/abundant sulphide blebs parallel to bedding.
Approx. base "A"Groove at 531'.
Very low grade oilshale.
Low grade oilshale.
Very low grade oilshale.
Interbedded tuff and oilshale.
Low grade oilshale.
386'
396'
406'
416'
426'
436'
446'
456'
466'
476'
486'
496'
506'
516'
526'
534'
44'
BRECCIA ZONE 5c, 5b


526'
534'
544'
554'
556'
566'
576'
586'
596'
606'
611'
616'
626'
636'
646'
656'
666'
672'
676'
TD
Barren marlstone.
524.5-526' Missing
Barren marlstone w/abundant sulphide blebs parallel to bedding.
Approx. base "A"Groove at 531'.
Very low grade oilshale.
Low grade oilshale.
Very low grade oilshale.
Interbedded tuff and oilshale.
Low grade oilshale.
Medium grade oilshale.
Low grade oilshale.
Mahogany Marker 554.7-555.15'
Low grade oilshale.
"Roof tuff"; parted at base
Low grade oilshale.
High grade oilshale,
contorted beds.
Mahogany beds.
Low grade oilshale.
Medium grade oilshale.
High grade oilshale.
High grade oilshale with contorted beds.
Low grade oilshale.
High grade oilshale.
Low grade oilshale.
Very low grade oilshale.
Low grade oilshale.
Missing core (605.0-605.9), soln' cavity.
Missing 606.6-607.5', soln' cavity.
610.3-610.6' is broken zone as above.
608.2'-609.5' is broken zone
with claystone fragments, powdery,
putrid odor.
Low grade oilshale.
Very low grade oilshale.
Barren to very low grade marlstone.
Poker chip zone (<0.2' long)
Broken zone (mud filled soln' cavity) 632.8-634.0'
Low grade oilshale.
Medium grade oilshale.
Very low grade oilshale.
Barren to very low grade marlstone.
Tan, massive tuff
Low grade oilshale.
.1' tuff
Very low grade oilshale.
Low grade oilshale.
Approx. top "B"Groove at 657.5'.
Barren marlstone
660.15-660.25' pyrite bed
662.8-662.9' sandstone; lt. gray, lam., very fine grain
2 joints
Sulphide blebs thruout interval
Small soln' cavities thruout interval.
TD