PLATFORM TYONEK

NORTH COOK INLET FIELD

INSTALLED 1968

Platform Tyonek

1. *Field name:* ..... North Cook Inlet field
2. *Platform operator:* ..... Phillips Petroleum
3. *Platform owner(s):* ..... Phillips Petroleum (100%)
4. *Original operator:* ..... Phillips Petroleum
5. *Structural design firm:* ..... McDermott
6. *Fabrication yard (structure):* ..... Mitsubishi Heavy Industries, Hiroshima, Japan
7. *Installation year and contractor:* ..... 1968; McDermott
8. *Waterdepth (at MLLW):* ..... 100 ft
9. *Number and diameter of legs:* ..... Four; 14 ft diameter
10. *Number, size and penetration of piling:* ..... Eight per leg; 30 inch diameter; 175 ft penetration
11. *Number, size and penetration of inner piling:* ..... None
12. *Method of installation (driven, drilled, combination):* ..... Driven
13. *Length of grouted interval in legs:* ..... Annulus grouted from bottom to top of leg
14. *Design codes used (UBC, AISC, API RP 2A, etc):* ..... AISC; UBC, edition current in 1967

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15. *Number of completed wells in each leg through piling:* ..... Leg 1 - one well plus one well drilling; Leg 2 - three wells; Leg 3 - eight wells; Leg 4 - none
16. *Other completed wells in each leg:* ..... None
17. *Top girders used as storage tanks ?* ..... Yes
18. *If so, what type of liquid:* ..... Water, diesel, oily water, well test crude

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19. *Design criteria used:*
    - *(1) Ice thickness and strength:* ..... Used 120 kips/ft of leg diameter for front legs; 50 kips/ft for back legs; impact load of 1500 ton ice at 10 fps (3900k)
    - *(2) Wave height and period:* ..... 27.5 ft, 8.5 sec period (per A.H. Glenn)
    - *(3) Wind:* ..... 80 mph
    - *(4) Earthquake:* ..... 0.1 g lateral load per 1967 UBC
    - *(5) Temperature:* ..... Steel -40° F; piping -50° F
    - *(6) Current:* ..... Current 10.14 fps full depth
20. *Design considerations:* ..... Twenty year design life

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21. *Unusual circumstances during installation ?* ..... None
22. *Significant modification or additions to topsides:* ..... Heavier drilling rig
23. *Any significant structural damage incidents ?* ..... None
24. *Has platform structural design been re-assessed ?* ..... Yes
25. *If so, by whom and for what reason:* ..... Hopper and Associates; Addition of a larger drilling rig and anticipated long service life (40 years)

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26. *Type of steel used; above water and below water:* ..... Above and below water A-516 Grade 70 Mod A.
27. *Steel corrosion allowance used:* ..... ½ inch from minus 12 to plus 31 feet
28. *Type of cathodic protection:* ..... Ten seabed impressed current anode sleds; Impressed current anodes in each inner leg.

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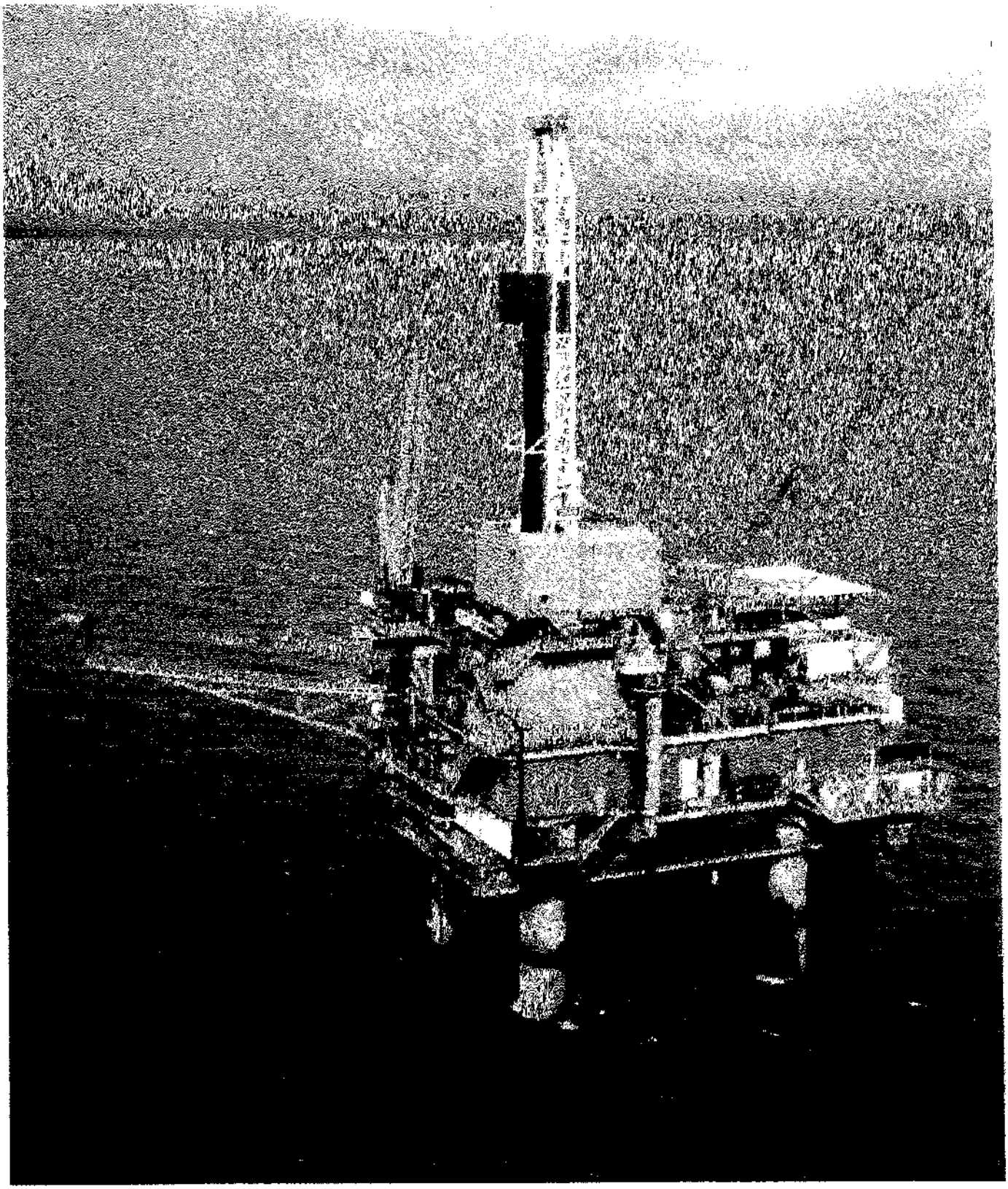
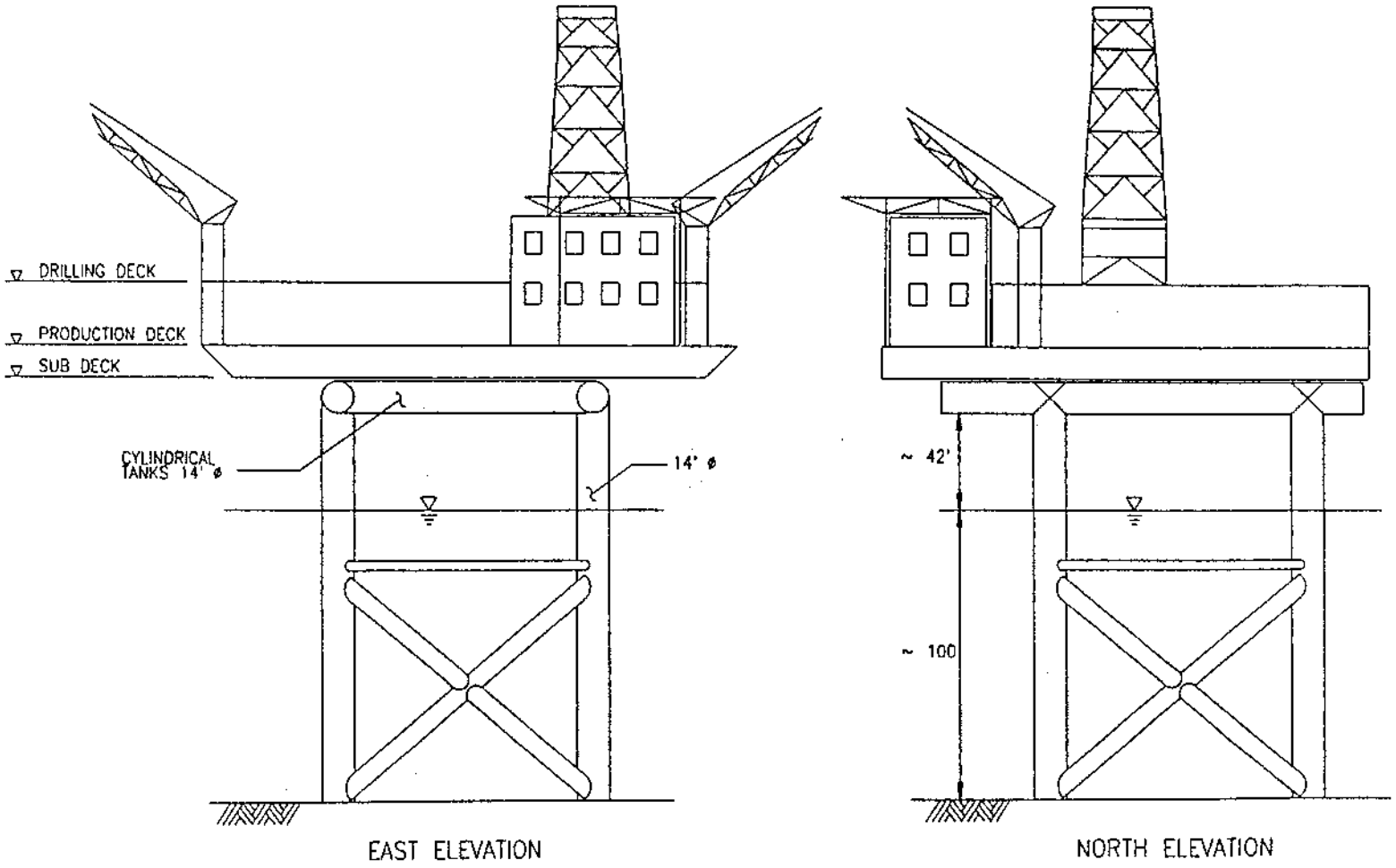
29. *Dates and API RP 2A levels of underwater inspection:* ..... Level II and III surveys in 1983, 1986 and 1990. Additional survey scheduled for 1993.
    Level III inspection performed on selected joints until all critical joints were inspected.



Platform Tyonek in the North Cook Inlet field.



Elevation views of platform Tyonek