

ANALYSIS OF THE POLAR TRIPS OF DR. COOK AND R. E. PEARY AS COMPILED FROM THE STORIES TOLD BY THE TWO MEN

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FOR purposes of comparison the Herald publishes below, side by side, diaries of the journeys of Dr. Cook and Mr. Peary, obtained by analysis of the officially published stories. Both diaries are from the time when the advance over the sea was begun, and both are carried to the date when the objective was reached.

Where want of definiteness renders a range of positions possible the position taken is that which calls for least unevenness in the performance on consecutive days consistent with the statements in the stories.

Later more frequent determinations of position are recorded in the story, and averages have been used. As an illustration of the way in which Mr. Peary's positions were fixed, when not actually given in the story, that at the end of the day on March 27 may be instance. It is given in the table as 87 deg. 5 min. The short story says, "Crossed 87th parallel March 27. Passed American record March 28." The camp on the night of March 27 must have been somewhere between these two points, 87 deg. and 87 deg. 6 min. The actual position used, 87 deg. 5 min., was given so as to make the average in the three days previous to this camp as near as possible to the average of the three days following it.

Again, at the start on March 22, the position by observation was 85 deg. 48 min. On March 23 the 86th parallel was crossed and Nansen's farthest north, 86 deg. 14 min., was passed. On March 24 Captain Bartlett "reached off pump twenty miles," and the Italian record, 86 deg. 34 min., was passed. The position when the observation was taken at the end of this twenty mile march was 86 deg. 28 min. From these data the most even distribution of distances which fills all the above conditions is:—

Considerations similar to these were used throughout. As well as the mileages and positions the diaries include the explorers' descriptions of the ice, their scientific and weather observations and the most important incidents and happenings day by day.

All miles are nautical miles. Six nautical miles are roughly equal to seven statute miles. One nautical mile is about three hundred yards longer than a statute or ordinary mile.

Black figures for positions indicate that the position was determined by observation, for distances that the number of miles is either definitely stated in the story or can be absolutely inferred.

DR. COOK'S RECORD TABULATED.

Date	Position at Beginning	Position at End	Distance Covered	Character of Ice and Going	Scientific and Weather Observations	Incidents and Progress
March 18, 1908.	81° 20'	81° 46'	26	Rough ice, clear of snow, with crevasses and pressure lines. At end big hummocks and great banks of snow.	Half gale into Nansen Sound from N. W. Driving snow. At noon horizon cleared. Wind veered to S. W. Course slightly west of north.	Party divided. Six Eskimos returned. Left northernmost point of Helberg Island about noon. At night wrote final letters and instructions for Franke.
March 19.	81° 40'	82° 07'	27	Fields of thick ice gave place to moderate sized floes after few hours' march. Troublesome pressure line.	Clear air. Humid chill. Temperature—56° F. Light westerly wind. Sun burned.	Supporting party volunteered for another day's journey.
March 20.	82° 07'	82° 23'	16	At end of day appeared to be beyond region where ice was crushed by influence of land pressure. Small ice and great hummocks behind. Expanse of larger floes ahead.	At end of day position, by dead reckoning latitude 82° 23', longitude 95° 14'.	Supporting party returned at end of day.
March 21.	82° 23'	82° 52'	29	Good going. Snow hard. Fairly large ice floes.	In early morning temperature—63° F. Steady and high barometer. No wind. No clouds. Helberg Island already only a dull blue haze. Saw mirages of Greenland. Suddenly land settled in afternoon. Fierce wind at night.	Forced march of fourteen hours. Fell asleep before building house. Awakened by wind about an hour later.
March 22.	82° 52'	83° 14'	22	At 6 P. M. encountered a line of high pressure ridges. Beyond this smaller floes. Few hours later snow a broad, dark line—a cut several miles wide—separating the packs. Found promising crossing on young ice.	Storm ceased in morning. Temperature—59° F. Upper surface of Grant Land appeared a mere line. Temperature gradually rose to—46° F., but fell rapidly with setting sun. Light wind, slightly north of west. Course slightly west of north.	Emerging at noon. Camped near lead. Kept awake at night by growling ice and eagerness to cross the lead.
March 23.	83° 14'	83° 31'	17	Ice on big lead hardly safe. Surface vibrated when crossing. Some easterly drift of ice noted. Small floes, with low pressure lines, separated by belts of young ice, the rule.	Indications of wind in western skies. Few algae gathered at big lead. Temperature rose to—41° F. Course set slightly west of north for 97th meridian at 85th parallel. Strong appearance of land in west. Light wind. Beautiful night. After sunset three suns appeared in prismatic colors and then sank. During night colors in sky and on ice.	Soon after an early breakfast out testing thin ice. Started on snow shoes. Two trips across big lead two miles wide. After eleven hours' march in cleared twenty-three miles, but northerly advance was seventeen. First day on central pack.
March 24.	83° 31'	83° 40'	9	Ice, though newly crevassed, improved.	Observation at noon gave position lat. 83.31, long. 96.27. Land clouds of Grant Land visible. Suggestion of land on west. Surmised Crocker Land. Blowhole of seal and tracks of bear found. No algae or other life found in sea. Weather good in early afternoon. Heavy wind and snow-storm at night.	Time up to midday spent in observations and study of conditions. Goggles of amber glass afforded relief from snow glare. Kept on march till near midnight.
March 25.	83° 40'	84° 07'	27	Ice in violent motion after storm. Jets of frosty steam arose from black lines of water. On march ice improved. Safe crossing found over new crevasses.	Storm ceased suddenly in early morning. During storm temperature rose to—29° F. After storm dropped again to—40° F. Strong westerly wind. Piercing cold. Chilly bluster. Western horizon remained persistently undisturbed. Storm gathering, but long time arriving. Position by dead reckoning, lat. 84° 24', long. 96° 53'. Rose half a gale at night. Wind ceased at noon. Squall in afternoon, which lulled. Temperature—41° F. Barometer 29.06. At sunset wind increased again.	Dogs buried in snow. Nearly caught in crevasses formed by spreading of ice while asleep. Quick breakfast. Progress good.
March 26.	84° 07'	84° 24'	17	—	—	At end of march strong igloo built to withstand storm and for day of rest.
March 27.	84° 24'	84° 41'	17	Hummocky ice.	—	At rest in camp. Fair day's march.
March 28.	84° 41'	84° 50'	9	On march pack had been much disturbed.	Snow storms in early morning. Cleared soon after noon.	Buried in snowdrift in camp on march. Lost time and distance in searching for workable line of travel. Advanced nine miles.
March 29.	84° 50'	85° 00'	10	Easterly drift continued.	Good, clear weather. Fog in west had vanished, revealing new land. Land described. Coastal drawn over land in afternoon of March 31. Seen no more.	Managed to march each day between storms. Progress slow.
April 1.	85° 00'	85° 10'	10	Fractured, irregular ice.	Strang winds. On April 3 barometer steady. Thermometer sank. Sun at midnight sank for but a few moments.	Long and forced marches.
April 2.	85° 10'	85° 20'	10	—	—	—
April 3.	85° 20'	85° 30'	10	—	—	—
April 4.	85° 30'	85° 40'	10	—	—	—
April 5.	85° 40'	85° 54'	14	Ice steadily improved. Fields became larger and thicker. Pressure lines less frequent and less troublesome.	No more signs of life. Ice frequently measured. Horizon never perfectly clear, but weather good enough for frequent nautical observations. Mist over northern sea at midnight.	—
April 6.	85° 54'	86° 08'	14	—	—	—
April 7.	86° 08'	86° 22'	14	—	—	—
April 8.	86° 22'	86° 36'	14	—	—	—
April 9.	86° 36'	86° 50'	14	—	—	—
April 10.	86° 50'	87° 04'	14	—	—	—
April 11.	87° 04'	87° 18'	14	—	—	—
April 12.	87° 18'	87° 32'	14	—	—	—
April 13.	87° 32'	87° 46'	14	—	—	—
April 14.	87° 46'	87° 60'	14	—	—	—
April 15.	87° 60'	87° 74'	14	—	—	—
April 16.	87° 74'	87° 88'	14	—	—	—
April 17.	87° 88'	87° 102'	14	—	—	—
April 18.	87° 102'	87° 116'	14	—	—	—
April 19.	87° 116'	87° 130'	14	—	—	—
April 20.	87° 130'	87° 144'	14	—	—	—
April 21.	87° 144'	87° 158'	14	—	—	—
April 22.	87° 158'	87° 172'	14	—	—	—
April 23.	87° 172'	87° 186'	14	—	—	—
April 24.	87° 186'	87° 200'	14	—	—	—
April 25.	87° 200'	87° 214'	14	—	—	—
April 26.	87° 214'	87° 228'	14	—	—	—
April 27.	87° 228'	87° 242'	14	—	—	—
April 28.	87° 242'	87° 256'	14	—	—	—
April 29.	87° 256'	87° 270'	14	—	—	—
April 30.	87° 270'	87° 284'	14	—	—	—

MR. PEARY'S DATA COMPILED.

Date	Position at Beginning	Position at End	Distance Covered	Character of Ice and Going	Scientific and Weather Observations	Incidents and Progress
March 1, 1909.	83° 07'	83° 17'	10	Expected a lot of rough ice. Was prepared to have a road through jagged ice for hundreds miles or so.	Temperature below zero. Strong easterly wind; drifting snow.	Rough ice damaged several sledges and smashed two completely. Teams went back to Columbia for other sledges left there. Camped 10 miles from Crane City.
March 2.	83° 17'	83° 28'	11	Open lead encountered.	Still wind.	British record of Admiral Marham, 83° 20', passed. Stopped by open water formed by wind after Bartlett had passed.
March 3.	83° 28'	83° 39'	11	Much open water.	Wind formed open water all round.	Crossed the lead. Open water caused delay. Borup had gone back from Bartlett's third camp. Moved his way through faulting of trial by ice movement. Marvin went back for more fuel and sleds. Bartlett's third camp reached.
March 4.	83° 39'	83° 50'	11	Open water; wide lake.	—	Came across Bartlett stopped by water.
March 5 to March 10	—	—	—	—	At noon of March 5 sun seen first time this year.	Anxious for Marvin and Borup. Concluded they had lost trail or were imprisoned on island by open water.
March 11.	85° 50'	84° 01'	11	Lead sounded 110 fathoms. Just frozen leads followed one after the other. Few hundred yards to a mile wide. Really simple march.	—	Left note for Borup and Marvin to push on by forced marches. Crossed lead. Crossed 84th parallel.
March 12.	84° 01'	84° 12'	11	—	—	—
March 13.	84° 12'	84° 23'	11	—	—	While making camp messenger from Marvin came in, saying Marvin was on trail.
March 14.	84° 23'	84° 34'	11	Got beyond leads. Found decent going.	Temperature 59° below zero.	Henson sent ahead to pioneer five marches. Goodwill returned to Cape Columbia. Marvin and Borup came in at night.
March 15.	84° 34'	84° 44'	10	Going satisfactory. Latter part distinct movements in ice could be seen and heard. Open lead at end sounding 325 fathoms.	Temperature at camp 50° below.	McMillan sent back because of frostbitten foot. Satisfactory distance covered. Stopped by open lead.
March 16.	84° 44'	84° 50'	6	—	—	Short march.
March 17.	84° 50'	84° 56'	6	—	—	Came upon Henson mending sledges. Spent rest of day working on sledges. Short march.
March 18.	84° 56'	85° 06'	10	Considerable young ice.	—	Marvin to pioneer trail in two forced marches. Crossed 85th parallel.
March 19.	85° 06'	85° 23'	15	Considerable young ice.	—	End of tenth march (sic).
March 20.	85° 23'	85° 35'	12	Satisfactory going.	—	Borup returned, commanding second supporting party. Bartlett pioneered trail. New travelling scheme.
March 21.	85° 35'	85° 48'	13	Satisfactory going.	Marvin took latitude. Agreed with dead reckoning.	Good distance covered.
March 22.	85° 48'	85° 59'	11	Going improved.	—	Used ice cakes to ferry across open lead. Crossed 86th parallel. Passed Nansen's record, 86° 14'. Good distance covered.
March 23.	85° 59'	86° 18'	19	Open lead encountered.	—	Bartlett made twenty miles. Passed Italian record, 86° 24'. Marvin turned back, commanding third supporting party.
March 24.	86° 18'	86° 38'	20	—	—	Had to make detour because of open lead.
March 25.	86° 38'	86° 47'	9	Fairly level ice on all sides in apparently unbroken expanse; good going.	Marvin got sight for latitude.	Crossed 87th parallel. Found Bartlett disheartened by very heavy work of road making.
March 26.	86° 47'	86° 56'	9	Open lead encountered.	—	—
March 27.	86° 56'	87° 05'	9	Very heavy and deep snow. Filled in hollows in heavy rubble ice.	—	—
March 28.	87° 05'	87° 19'	14	Open lead at end. Ice across the lead moved to east. Violent movements of ice all night.	Hazy atmosphere, light equal everywhere. Thick haze driven before biting northeast wind. At night storm clouds on all sides except south.	Passed American record, 87° 6'. Dogs nearly dragged into water by ice movements. Got out of difficulties by going west on to big ice floe.
March 29.	—	—	—	Violent movements of ice lasted all day.	—	—
March 30.	87° 19'	87° 33'	14	Number of open leads at first. Then heavy old ice. Later six miles of young ice. Finally heavy old ice floes with covering of hard snow.	Atmosphere cleared.	Long march.
March 31.	87° 33'	87° 48'	15	More old floes, getting bigger. Covering of hard snow.	High wind from north; lasted all night.	Bartlett's last march.
April 1.	87° 48'	—	—	—	Clear weather. Wind blew all day. Bartlett took observation.	Bartlett went ahead of camp. Mended sledges and prepared for dash alone. Bartlett started back with fourth supporting party.
April 2.	87° 48'	88° 13'	25	Going best yet. Large old floes of hard, clear ice. Some of ridges surrounding them very big, but easily negotiated. At end of day long lead formed on east and southeast a few miles away.	Fine morning. Wind had gone down.	Crossed 88th parallel. Good pace for ten hours. Travelled 25 miles. Few hours' sleep.
April 3.	88° 13'	88° 37'	24	Going practically level, but pinpoints headed at start. Open lead encountered. Heard ice grinding all round. No visible motion.	Fine weather.	Made twenty miles in ten hours. Were half way to next parallel. Stopped a few hours, then started in again before midnight.
April 4.	88° 37'	89° 01'	24	Going better yet. Ridges interrupted level surface occasionally. Lake glacial finger from Hecla to Columbia. Dogs trotted often. Lead left behind toward end.	Better weather.	Short stop late in day; started in again before midnight. Crossed with parallel a little before midnight.
April 5.	89° 01'	89° 25'	24	Fine going. Young ice for last few hours. Sometimes dogs galloped. Like great ice cap interior of Greenland.	Good weather. Bitter air. Observation indicated 89° 25'.	Made twenty-five miles in nine hours. Had longer sleep at end of day.
April 6.	89° 25'	89° 50'	25	Going still better. Hardly any snow on ice. Last summer's surface on floes. No sign of lead on whole march.	Atmosphere dense. Black horizon. Thick weather. Temperature rose to 15° below. At noon clouds broke. Observation at noon indicated position as 89° 57'.	Made forty miles in twelve hours.
April 7 (noon to April 8 noon)	—	—	—	—	Late in day light breeze from west sprang up. After that until departure weather perfect. Minimum temperature, 29°; maximum, 12°.	At pole. Went ten miles beyond camp and eight miles to east. Took observations and photographs. Planted flag. Left records. Looked for land. Searched for sounding places.