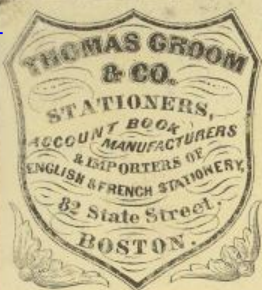


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COLORADO SURVEY

LATITUDE BY POLARIS

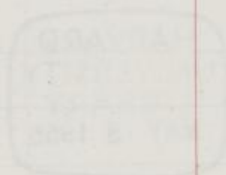


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LATTITUDE BY POLARIS



KG 11365-266

Exploration and Survey of Colorado River.

T. Groom & Co., Stationers.

LATITUDE BY POLARIS.

Station	Camp 1	Camp 1	Camp 1	Camp 1
Date	1857 Dec. 23	1857 Dec. 23	Dec. 26	Dec 28
* Polaris				
Time of obs'n by chron'r	=	4.34.01.15	3.43.50	4.40.29.2
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	66.15.10.6	66.28.40	66.12.01
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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LATITUDE BY POLARIS.

Station		Camp 15	Camp 18	Camp 19
Date		Jan 14	Jan. 17	Jan. 18
* Polaris				
Time of obs'n by chron'r	=	3..33..22	4..03..36.0	4..13..32.4
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	68..51..50	69..05..25.0	69..21..36
Index error	=		+ 20.0	
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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LATITUDE BY POLARS

Camp 22	Camp 23	Camp 24	Camp 26	Camp 27
Jan 21	Jan 22	Jan 23	Jan. 25	Jan. 26
6. 42. 10	5. 33. 00. 14	4. 30. 46. 0	6. 29. 15. 21	5. 38. 53. 0
68. 38. 30. 0	69. 25. 27. 14	70. 12. 44	69. 31. 12. 85	70. 02. 27. 9

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LATITUDE BY POLARIS.

Station		Camp 28	Camp 30	Camp 32
Date		Jan. 27	Jan. 29	Jan. 31
* Polaris				
Time of obs'n by chron'r	=	4. 52. 02. 07	4. 44. 22. 28	5. 03. 15. 4)
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	70. 27. 52. 8	70. 44. 44. 3	70. 42. 26
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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LATITUDE BY POLARIS

Camp 33	Camp 36	Camp 38	Camp 43	Camp 45
Feb. 1 st	Feb. 4 th	Feb. 6	Feb. 12	Feb. 15
5.50.22.4	76.23.23.2	5.55.08.1	6.00.37.8	6.44.18.6
70.35.12.0	70.31.28.0	70.52.04	71.41.04	71.23.46

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LATITUDE BY POLARIS.

Station		Camp 47	Camp 48	Camp 49
Date		Feb. 17	Feb. 18	Feb. 20
* Polaris				
Time of obs'n by chron'r	=	6.. 27.. 12.4	6.. 14.. 16.2	6.. 17.. 35.2
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	71.. 51.. 40.0	72.. 22.. 16	72.. 22.. 10
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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1 or 2 hundred yds. higher up the bank than Feb. 22nd	50 yds north of station of Feb. 27			
Camp 49 Feb. 22	Camp 50 Feb. 24	Camp 51 Feb. 25	Camp 53 Feb. 27	Camp 53 March 1 st
7.21. 24.0	7.05. 14.6	7.32. 39.8	6.55. 10.8	7.40. 16.8
71.39. 38.0	71.55. 34.0	71.40. 34	72.23. 06	71.51. 18

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LATITUDE BY POLARIS.

Station		Camp 54	Camp 56	Camp 57
Date		March 2 ^d	March 5 th	March 6 th
* Polaris				
Time of obs'n by chron'r	=	8..16..09.8	7..38..11.2	7..52..06.2
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	71..36..08.0	72..11..54	72..08..14.0
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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Bivouac 2	Beale's Crossing	Meadow Creek		
Camp 58?	Camp 59?	Camp 60	Camp 61	Camp
March 10	March 22	March 23	March 25	March 26
11..49..07.5	9..42..13.69	10..33..31.8	10..04..01.8	10..10..05.3
71..32..50	69..21..18	68..47..12	69..03..46.0	69..14..10

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LATITUDE BY POLARIS.

Station		Camp 64	Camp 65	Camp 67
Date		March 29	March 30	April 2
* Polaris				
Time of obs'n by chron'r	=	10.07.37.7	10.01.04.0	11.37.02.6
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	69.42.42.0	69.49.22.0	69.30.06
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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Camp 68 April 4 th	Camp 69 April 5 th	Camp 71 April 9 th	Camp 72 April 11	Camp 73 April 14
11. 29. 50.6	10. 23. 09.6	9. 54. 22.3	10. 59. 10.0	10. 23. 26.2
69. 19. 50	69. 56. 38	70. 46. 10.0	70. 19. 56.7	70. 52. 44

Exploration and Survey of Colorado River.

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LATITUDE BY POLARIS.

Station		Camp 75	Camp 77	Camp 78
Date		April 19	April 21 st	April 23
* Polaris				
Time of obs'n by chron'r	=	12 ^h 10 ^m 58 ^s	12 ^h 06 ^m 13 ^s 2	12 ^h 26 ^m 13 ^s
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	69 ^h 07 ^m 32 ^s	68 ^h 35 ^m 00 ^s	68 ^h 13 ^m 38 ^s
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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Camp 79.
April 24th

12..28..28.4

68..10..54.0

Camp 80
April 25

12..00..46.6

68..15..50

Camp 81
April 26

11..19..51.6

68..39..46

Camp 85
May 2

12..30..11

68..06..02

Camp 86
May 3

11..51..25.4

68..40..30

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LATITUDE BY POLARIS.

Station		Camp 88	Camp 90	Camp 91
Date		May 5 th	May 7 th	May 9
* Polaris				
Time of obs'n by chron'r	=	11.56.01.0	11.52.09.6	12.07.38.2
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	67.54.28.0	68.21.26.0	68.36.02.0
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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LATITUDE BY POLARIS

Camp 92	Camp 93	Camp 97	Camp 98	Camp 99	Station
May 10	May 11	May 15	May 17	May 18	Date
12° 12' 17.4	12° 16' 23	12° 40' 23.6	12° 44' 54.4	12° 47' 26.4	* Polaris
					Time of obs.
					Error of obs.
					Std. time of obs.
68° 59' 40.0	69° 09' 40.0	69° 17' 38.0	69° 05' 26.0	68° 57' 56	Obs. hour, alt.
					Index error
					Refraction
					Corr. double alt.
					Altitude
					Lat. (true)
					Correct altitude
					Alt. - 1
					With instrument
					Std. time
					Approximate lat.
					Approximate alt. time
					and approximate alt.
					Approximate alt. time
					and date
					Latitude

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LATITUDE BY POLARIS.

Station		Camp 100	Camp 101	Camp 103
Date		May 19	May 20	May 23
* Polaris				
Time of obs'n by chron'r	=	12 ^h 67 ^m 43.6	12 ^h 58 ^m 36.2	1 ^h 39 ^m 12.2
Error of chron'r	=			
Sid'l time of obs'n	=			
Obs'd doub. alt.	=	68 [°] 57' 30"	68 [°] 44' 12.0"	68 [°] 35' 00"
Index error	=			
Eccentricity	=			
Corr't double alt.	=			
Altitude	=			
Ref'n (Bar. Thr.)	=			
Correct altitude	=			
Alt. — 1'	=			
With argument, } Sid'l time } 1st cor'n	=			
Approximate lat.	=			
Arguments, sid'l time } and approximate alt. } 2nd cor'n	=			
Arguments, sid'l time } and date } 3d cor'n	=			
Latitude of place				

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