

4505

4505

Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: Ore.

11-5813

DESCRIPTIVE REPORT.

Hyd. Sheet No. F 4505

LOCALITY:

Pacific Coast

C. Sebastian to Port Orford

1925

CHIEF OF PARTY:

T. J. Maher

STATISTICS SHEET NO. "F".

Date, 1925	Letter	Volume	Positions	Soundings	Miles Statute	Vessel
July 8th	A	1	43	105	20.0	GUIDE
" 10th	B	1	60	234	28.0	"
" 13th	C	1	44	176	24.0	"
" 15th	D	1	52	134	29.0	"
" 16th	E	1	17	29	5.2	"
" 17th	F	1	9	33	5.9	"
" 24th	G	2	12	29	7.0	"
" 30th	H	2	45	102	23.6	"
Aug. 21st	J	2	122	228	60.0	"
" 22nd	K	2	55	97	23.4	"
" 24th	L	2-3	74	190	36.0	"
" 25th	M	3	184	213	63.6	"
" 26th	N	3	219	249	69.8	"
" 27th	P	3-4	212	298	81.0	"
" 28th	Q	4	138	179	52.3	"
" 29th	R	4	101	135	39.2	"
Sept. 3rd	S	4-5	139	174	56.0	"
" 4th	T	5	180	421	70.2	"
" 5th	U	5	66	103	22.5	"
" 10th	V	5-6	149	271	60.2	"
" 11th	W	6	54	106	26.0	"
" 26th	X	6	57	89	19.0	"
Oct. 9th	Y	6	87	174	26.5	"
" 10th	Z	6-7	156	283	41.5	"
" 12th	AA	7	87	190	30.4	"
" 13th	BB	7	93	165	29.3	"
" 14th	CC	7	59	101	21.4	"
" 23rd	DD	7-8	132	287	38.5	"
" 24th	EE	8	101	252	32.5	"
" 27th	FF	8	76	149	28.4	"
" 28th	GG	8	16	27	4.0	"
Nov. 7th	JJ	9	137	136	27.0	"
" 7th	a	1	65	184	9.5	Motor Sailer
TOTAL.....			3041	5543	1102.8	

(cont'd.)

SOUNDINGS IN FATHOMS

Automatic Tide Gauge #121 at Port Orford, Oregon

Lat.  $42^{\circ} - 44' - 30''$  N

Long.  $124^{\circ} - 29' - 53''$  W

Plane of Reference - M. L. L. W.

Lowest tide observed  $+0.2'$

Highest " "  $+11.05'$

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TOTAL.....			3041	5543	1102.8	

(cont'd.)

SOUNDINGS IN FATHOMS

Automatic Tide Gauge #121 at Port Orford, Oregon

Lat.  $42^{\circ}44' - 30''$  N

Long.  $124^{\circ} - 29' - 53''$  W

Plane of Reference - M. L. L. W.

Lowest tide observed + 0.2'

Highest " " + 11.05'

FEB 23 1926

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in  
10 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4505

Locality: Coast of Oregon

Chief of Party: T. J. Maher in 1925

Plane of reference is  
2.4ft. on tide staff at Port Orford

For reduction of soundings, condition of records satisfactory  
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A. M. or P. M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.



Chief, Division of Tides and Currents.

Attach to H. 4505

Mr. Giacomini,

Triangulation Station Tschenois  
Rock was set in as a no check point by F. W. Hough  
1924. Apparently there is no error in the  
computation of the point. It can not of course be  
guaranteed as there is no check on the observations.  
It should be noted also that there seem to be  
a number of other rocks in the immediate  
vicinity some of which may have been taken  
for Tschenois rock from a distance.

As there is no check on either of the years  
work it is impossible to tell which is in error.

C. P. Sutherland

Hydrographic Sheet No. 4505  
Cape Sebastian to Port Orford. "Oregon."

The major portion of the survey covered on this sheet is tube work with an occasional vertical cast for testing tubes, the balance but a minor portion "Sonic" and in the vicinity of of N.W. Rock "lead". The area surveyed appears to be sufficiently well covered to approximate bottom condition closely and that additional work is not necessary.

Tracing and plotting by Field Party  
fair.

Records not always clear and numerous  
rejected positions and missed soundings  
appear.

John D. Torrey  
4/21/26.



4505

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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

E. Lester Jones, Director.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "F", COVERING  
OFF-SHORE AREA BETWEEN PORT ORFORD AND CAPE SEBASTIAN, OREGON.

U. S. COAST AND GEODETIC SURVEY

STREAMER GUIDE

July to November, 1925.

Thos. J. Maher  
CHIEF OF PARTY.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "F", COVERING  
OFF-SHORE AREA BETWEEN PORT ORFORD AND CAPE SEBASTIAN, OREGON.

This work done in accordance with instructions dated May 6th, 1925, was started on July 8th, 1925, and completed on November 7th, 1925.

The sheet covers an area which lies approximately between Latitudes  $42^{\circ} - 20'$  and  $42^{\circ} - 42'$ , and Longitudes  $124^{\circ} - 27'$  and  $124^{\circ} - 41'$ . From the vicinity of Port Orford to the Rogue River Reef, soundings were not carried closer to the beach than distances which ranged from one to two miles. Rogue River Reef was not developed. Ship soundings were taken close to Northwest Rock and launch hydrography was carried very near it. No dangers were found in the immediate vicinity of the rock, nor to the westward of it. There is no reasonable excuse for any vessel to approach it closer than three quarters of a mile, and it should be given a berth of that distance.

To the southward of Rogue River Reef, the hydrography was not carried closer to the shore than to a line extending due south from the west edge of the reef. Some additional work will be done eastward of this line when surveys in this vicinity are resumed. Rogue River Reef and the in-shore area along this coast, at least within a mile of the beach, should be done by a decked launch. Open launches are not satisfactory, as weather conditions interfere too greatly with their operation. During the months of June, July and August, the sea is generally calm in the morning; about 10:00 A.M. daily, northwest winds spring up, which increase in strength until about 2:00 P.M.,

when a velocity of from thirty (30) to thirty-five (35) miles per hour is frequently attained, and the sea becomes too choppy to permit the use of open launches on hydrographic work. The wind gradually moderates until about 7:00 or 8:00 P.M., when it is again quite calm. There are few places where a ship can anchor and not many where small boats can obtain protection. If ship's launches are used, the ship will be tied to the locality where the launches are working. It is not practicable for a ship to drop launches in the morning and then take up hydrography, with the intention of picking up launches in the evening. Runs to and from working grounds are too great. Winds sometime spring up quickly and fog often closes in, so that it may not always be practicable for a ship to reach a launch when most needed. During August, September and October, fog is prevalent and difficulty might be experienced in locating boats dropped from the ship if the latter took up work in any distant locality.

A method which appears feasible for carrying on this in-shore work is to have it done by small parties, using chartered fishing boats, and employing the owners or parties in charge to operate the craft. Benefit of local knowledge would then be available, and this is of particular value in crossing the bar at Bendon and at Rogue River, or in anchoring in the lee of rocks on the reef, these crafts having living quarters which are satisfactory in an emergency.

Nearly all of the lumber schooners hug the coast and edges of reefs on their trips north. The reason given for this rather unsafe method of navigation is that the vessels are frequently under-

powered, and by so doing, the effects of the sea, northwest wind and current are not felt so strongly. A channel through Port Orford Reef is used very often. Occasionally large vessels cross Rogue River Reef. There are large areas, heavily covered with timber, which are not readily accessible from the available ports. The procedure considered for getting this timber out is to secure buoys with heavy moorings off coves or indentations in the coast near the timber locations. To these, lumber schooners make fast and delivery is made by aerial cable. One proposition of this kind just to the southward of Port Orford is now under consideration, and two others, one at Greenwood and one at Rockport, have been started. For this kind of traffic inshore surveys must be made with a degree of accuracy greater than ordinarily would be required along exposed coasts.

In the area surveyed, there are no outstanding features. The depths are fairly uniform. Sounding tubes were used for depths up to eighty fathoms. These were checked against up and down soundings, in accordance with the instructions covering the use of sounding tubes, in addition to which up and down soundings were taken every hour. This precaution was found necessary when it was discovered that untested tubes were frequently substituted for those which had been tested, the officers in charge not making any note of the change.

Weather conditions were as previously described. A southerly current varying from .5 to .9 knots was usually experienced. During the early summer months, northwest winds spring up in the forenoon, increase in strength in the afternoon but moderate toward evening,

creating a choppy sea but not producing any ground swell. A heavy ground swell from the southwest was occasionally experienced, making landings dangerous, even when local winds were gentle and the surface of the sea was comparatively smooth.

A tide gauge was maintained at Port Orford, Oregon. Launch work and some ship work were done around Northwest Rock on the last day of the season, after the tide gauge had been taken up. It therefore was necessary to use tide predictions for the reduction of those soundings. This was the only day during the season when the ship was in the vicinity of the Northwest Rock that the sea was sufficiently smooth to permit launch work. The season had actually been closed, but this favorable opportunity appeared and advantage was taken of it. Additional work remains to be done on this sheet when surveying operations are resumed in this vicinity, and for this purpose the boat sheet has been retained aboard the ship.



Thos. J. Maher

COMMANDING OFFICER,

Str. GUIDE.

POST OFFICE ADDRESS: Str. GUIDE, San Pedro, Calif.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

FEB 11 9 05 AM '26

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Str. GUIDE,  
February 4th, 1926.

To: Director, Coast and Geodetic Survey, Wash., D.C.  
From: Commanding Officer, Str. GUIDE, San Pedro, Calif.  
Subject: Field Records.

H. 4489  
H. 4505

Transmitted herewith are lists of directions taken from three stations on the Oregon Coast. Heads and Tichenor Rock are in the vicinity of Port Arford. Crooks Point is to the southward of Cape Sebastian. Attention is called to the fact that we had considerable difficulty in plotting soundings with angles taken to Tichenor Rock. It's location was obtained from triangulation records, but it was only an intersection point. I sent Mr. Cowie ashore to take a round of sections at Tichenor Rock, and the position which these gave differed materially from triangulation positions. Later in the season, I occupied Tichenor Rock personally, and also triangulation station Heads, the latter for the purpose of getting a cut of Tichenor Rock. Position determined from cuts so obtained checks that by Mr. Cowie.

It is my belief that the original triangulation Tichenor Rock was cut in from one direction, but from another direction another rock was mistaken for it. It might be advisable to check the position of Tichenor Rock as shown on the smooth sheet of the inshore hydrography of this area, executed by the party under the command of Captain Luce during 1924. Some of the officers onboard inform me that when Tichenor Rock was then used as one of the signals, the sounding lines would not plot in accordance with the courses steered. According to such information as I have been able to obtain, it was then used only on few occasions.

*Thos. S. Maher*  
Thos. S. Maher

COMMANDING OFFICER,  
Str. GUIDE.

TJM-e

FOR HYDROGRAPHIC USE ONLY

STR. GUIDE - 1925.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
FORM 24A

LIST OF DIRECTIONS

State: OREGON

Station Heads Computed by I. R. Station Tichenor Rock Computed by \_\_\_\_\_  
Observer T.J. Maher Checked by \_\_\_\_\_ Observer T.J. Maher Checked by \_\_\_\_\_

STATIONS OBSERVED	DIRECTIONS AFTER LOCAL ADJUSTMENT	FINAL SECONDS	STATIONS OBSERVED	DIRECTIONS AFTER LOCAL ADJUSTMENT	FINAL SECONDS
Blanco Lt. Hse.	00 - 00 - 00	"	Heads	00 - 00 - 00	"
Peak N.E. of Humbug Mt	146 - 26 - 40		Tank	26 - 16	
Humbug Mt. #1	163 - 18 - 20		Cable Hotel	27 - 40	
Hum. #2	163 - 22 - 40		Battle R K	28 - 47	
Tichenors Rock	226 - 07 - 05		P K	82 - 48	
Rock	321 - 49 - 30		Hum #2	110 - 37	
Best Rock	331 - 12 - 50		Hum #1	110 - 34	
Arca Rock	323 - 21 - 50		Red	116 - 14	
Rock close to shore	358 - 16 - 00		Cole	118 - 56	
			Stack C - Mt. Summit	129 - 22	
			Isle	135 - 32 - 45	
			Grizzly	139 - 28	
			Tich (dist. 5 m )	226 - 50	
			Rock	287 - 12	
			Rock	288 - 28	
			Rock large	282 - 35	
			Klooqueh R K	299 - 35	
			R K awash	307 - 46	
			Banner	323 - 56	

Do not write in this margin.

Station Chase  
Observer A. T. M.

Computed by A. T. M.  
Checked by A. R. L.

This form, properly filled out and checked, must be furnished by field parties. To be acceptable it must contain every direction observed.

It is to be used for observations with repeating theodolites, as well as direction theodolites.

Start each new station at the head of a new column.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00' 00." 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned clockwise around the whole circumference regard-

less of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting directions at the center. If the reduction is not made for some directions, they should be entered in pencil, with a footnote to that effect.

Directions in the main scheme should be entered to hundredths of seconds in primary triangulation; otherwise, to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in primary and secondary triangulation, and in tertiary triangulation to even seconds only. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. Measure no sum angles. Follow each measurement of every angle immediately by a measurement of its supplement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

STATIONS OBSERVED	DIRECTIONS AFTER LOCAL ADJUSTMENT	FINAL SECONDS
	c ' "	"
Central .....	0 00 00.00	Do not write in this column. It is for Office computation only.
White church spire, 8 miles.....	6 28 56.4	
Chase M. E. church, white spire.....	18 10 11.9	
Little River .....	18 20 10.78	
Lyons, salt works, center hoist.....	24 33 53.0	
Lyons, white spire, short.....	27 19 39.7	
Lyons, courthouse.....	27 55 34.2	
Lyons, white spire, slim.....	28 02 54.2	
Gilmore.....	53 32 33.44	
Savage.....	55 59 57.32	
Reference mark distant 66.65 meters.	171 34	
Section 3, T. 20, R. 10 W., NW. corner stone, distant 252.6 meters.	280 37 32	
Bossing .....	314 52 23.61	



LIST OF DIRECTIONS

State: O R E G O N

Station Crooks Pt. (ecc) Computed by \_\_\_\_\_ Station \_\_\_\_\_ Computed by \_\_\_\_\_

Observer W.F. Malnate Checked by \_\_\_\_\_ Observer \_\_\_\_\_ Checked by \_\_\_\_\_

11-758

Do not write in this margin.

STATIONS OBSERVED	DIRECTIONS AFTER LOCAL ADJUSTMENT			FINAL SECONDS	STATIONS OBSERVED	DIRECTIONS AFTER LOCAL ADJUSTMENT			FINAL SECONDS
	°	'	"	"		°	'	"	"
Δ Clay	00	- 00	- 00						
Yellow Rk	98	- 23							
Macks Arch	114	- 47							
⊙ Clay	286	- 20							
Sebastian	292	- 50							
Grass	293	- 42							

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON August 23, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4505

Cape Sebastian to Port Orford, Oregon

Surveyed in 1925.

Instructions dated May 6, 1925 and April 29, 1924 (GUIDE)

Chief of Party, T. J. Maher.

Surveyed by T. J. M., G. D. Cowie, L. P. Raynor.

Protracted by E. H. Bernstein, A. J. Hoskinson and W. F. Malnate.

Soundings plotted by W. F. Malnate.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions except that many of the tube soundings were accepted by the field party when the readings of the two tubes were in error by an amount beyond the allowable limit. This is particularly true of S day. There are also numerous soundings based on merely one tube reading, the other tube reading having been for some reason or other rejected by the field party.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the specific instructions except in the following respects:
  - a. Except for a small area at the southern end of the sheet the system of lines was run parallel to the coast line rather than normal to it.
  - b. Beyond the 50 fathom curve, lines were spaced approximately  $1/4$  mile instead of  $1/2$  mile as called for.

c. Paragraph 12 of the instructions (April 29, 1924) calls for only enough soundings to verify the old hydrographic sheets and a systematic hydrographic survey was to be made only in case changes have occurred. A comparison of the present survey with chart 5951 (based on the old surveys) shows a surprisingly good agreement in the soundings. It would therefore seem that a good portion of the field work on this sheet could have been eliminated.

4. No cross lines were run, but a comparison of adjacent lines shows a generally good agreement.

The line from 128 to 146 L appears to be in error, it being much deeper than the adjacent lines. It is possible that the line is misplaced due to a confusion of the distant signals. The line was therefore rejected. (Approved, L. O. Colbert.)

There were numerous other soundings throughout the sheet that appeared in error. In some cases they were rejected, but in most instances they were accepted as recorded. None of the rejected soundings were of a dangerous character and hence of no cartographic importance.

5. The information was sufficient for drawing the usual depth curves.
6. The usual field plotting was done by the field party and was well executed.
7. The junction with H. 4479 is not sufficient. Owing to the difficulty experienced with A Tich some of the work on H. 4479 had to be rejected which left a gap at the junction of the two sheets.

The junction with H. 4489 is adequate.

The junction with H. 4503 will be considered in the review for that sheet.

8. The following are suggestions for possible additional work:

- a. An adequate junction to be effected with H. 4479.
- b. A development of the 36 fathom sounding in Lat. 42° 42' 1000 m., Long. 124° 36' 370 m.
- c. A development of the 35 fathom sounding in Lat. 42° 42' 900 m., Long. 124° 33' 1120 m.
- d. A development of the area north and south of Island Rock.

*at the time of the survey*  
e. A development of the charted 2 1/2 fathom spot (authority letter 329 - 1925) west of Rogus River Reef in Lat. 42° 27' 1430 m., Long. 124° 30' 330 m. The least water obtained by this survey in this vicinity was 5 fathoms, the party at the time apparently not knowing of the reported 2 1/2 fathom spot.

f. A development of the reported obstruction<sup>?</sup> in approximately Lat. 42° 27' 1220 m., Long. 124° 30' 1420 m. (Authority, Light-houses Notice to Mariners 24 - 1925). The present survey shows 27 fathoms in this locality without any marked indication of shoaling. It is possible that the above mentioned 2 1/2 fathom spot and this reported obstruction are identical and that an error was made in estimating the distance. Both of these spots should be investigated, if possible, with the light wire drag. If it is not feasible to carry the drag close enough to the Northwest Rocks to cover the 2 1/2 fathom spot, then at least the vicinity of the "reported obstruction" should be dragged.

It is apparent that the survey party was not aware of these two reported groundings, which accounts for their not having investigated it further. The two reported groundings were not applied to the charts until after the completion of this survey.

9. Attention is called to the fact that the boat sheet was retained in the field pending resumption of operations in this vicinity (see page 4, Descriptive Report). It is suggested that the boat sheet be in all cases forwarded to the office together with the smooth sheet. It is indispensable in verifying the smooth sheet and often contains information not readily apparent on the smooth sheet or in the records. If necessary it could be returned to the field when needed.

Attention is further called to the fact that there is some doubt as to the existence of the 12 fathom sounding in Lat. 42° 28' 490 m., Long. 124° 30' 355 m. Pending the arrival of the boat sheet this sounding should not be charted. If it is verified by the boat sheet then additional development will be necessary.

Verified  
by Boat Sheet  
Oct. 25, 1926.

10. The character and scope of the survey are good.  
The field drafting is excellent.
11. Reviewed by A. L. Shalowitz, June, 1926.

*Approved*  
*[Signature]*

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

4505

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. (F)4505

State . Oregon . . . . .

General locality . ~~Southern Oregon~~ Pacific Coast . . . . .

Locality . C. Sebastian to Port Orford . . . . .

Chief of party . T. J. Maher . . . . .

Surveyed by T. J. M., C. D. C., L. P. R., E. H. B., A. J. H., J. H. S., I. R., W. F. M. *with* *Ernest* *Service* *at the* *Coast*

Date of survey . July 8th to November 7th, 1925 . . . . .

Scale . . 1:40,000 . . . . .

Soundings in . . . fathoms . . . . .

Plane of reference . M.L.L.W. . . . . .  
A. J. H., E. H. B., &

Protracted by W. F. M. . . . . Soundings in pencil by W. F. M. . . . .

Inked by J. D. Tarrey . . . . Verified by J. D. Tarrey . . . .

Records accompanying sheet (check those forwarded):

Des. report, \_\_\_\_\_ Tide books, \_\_\_\_\_ Marigrams, 2 Boat sheets,

10 Sounding books, \_\_\_\_\_ Wire-drag books, \_\_\_\_\_ Photographs.

Data from other sources affecting sheet 31 tube graphs . . . . .

Remarks:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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Chief of party . . . T. J. Maher . . . . .

Surveyed by T. J. M., G. D. C., L. P. R., E. H. B., A. J. H., J. H. S., I. R., W. F. M.

Date of survey July 8th to November 7th, 1925 . . . . .

Scale 1:40,000 . . . . .

Soundings in . . fathoms . . . . .

Plane of reference M.L.L.W. . . . . .

Protracted by A. J. H., E. H. B., & W. F. M. . . . . . Soundings in pencil by W. F. M.

Inked by . . . . . Verified by . . . . .

Records accompanying sheet (check those forwarded):

Des. report, \_\_\_\_\_ Tide books, \_\_\_\_\_ Marigrams, 2 Boat sheets,

10 Sounding books, \_\_\_\_\_ Wire-drag books, \_\_\_\_\_ Photographs.

Data from other sources affecting sheet 31 tube graphs . . . . .

Remarks: