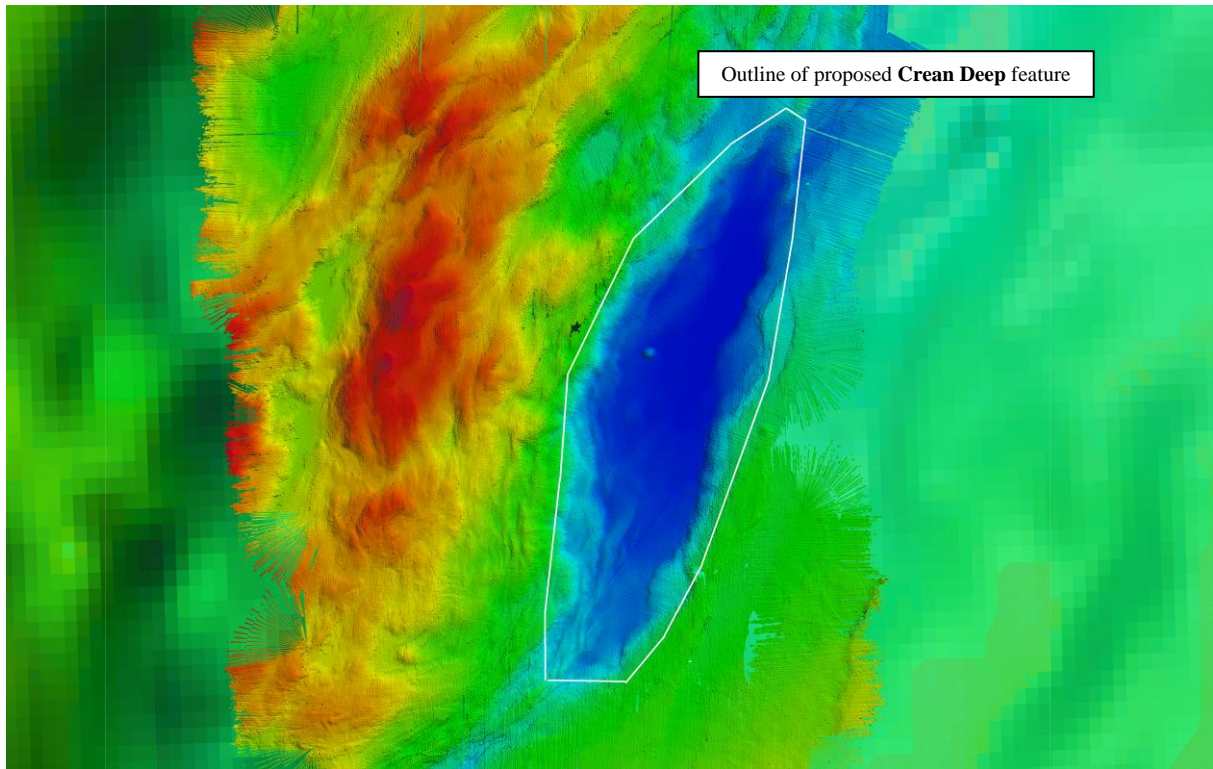


**UNDERSEA FEATURE NAME PROPOSAL**  
(Sea NOTE overleaf)

Note: The boxes will expand as you fill the form.

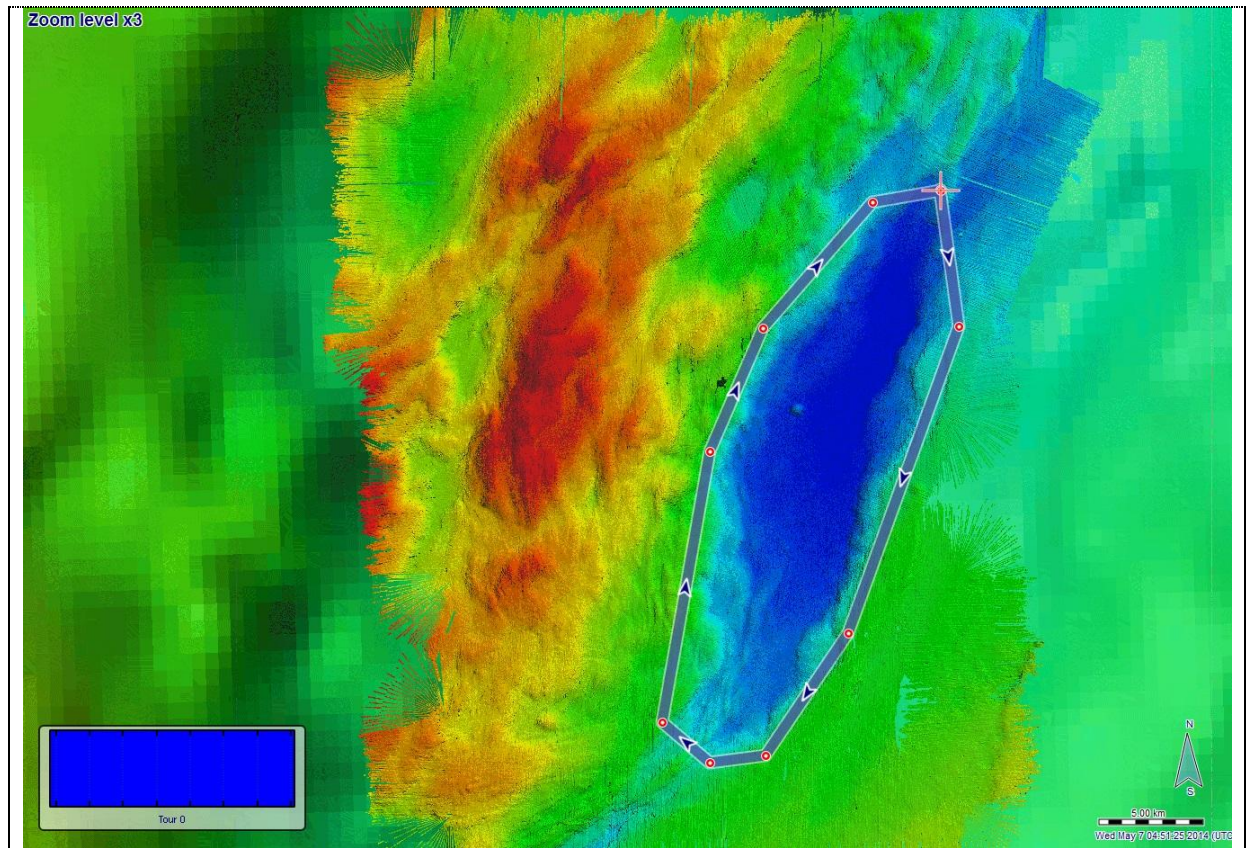
<b>Name Proposed:</b>	<b>Crean Deep</b>  <i>(Can be changed to Basin if this is deemed a better feature name)</i>	<b>Ocean or Sea:</b>	South Pacific Ocean
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<b>Geometry</b> that best defines the feature (Yes/No) :						
Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		<b>Yes</b>				

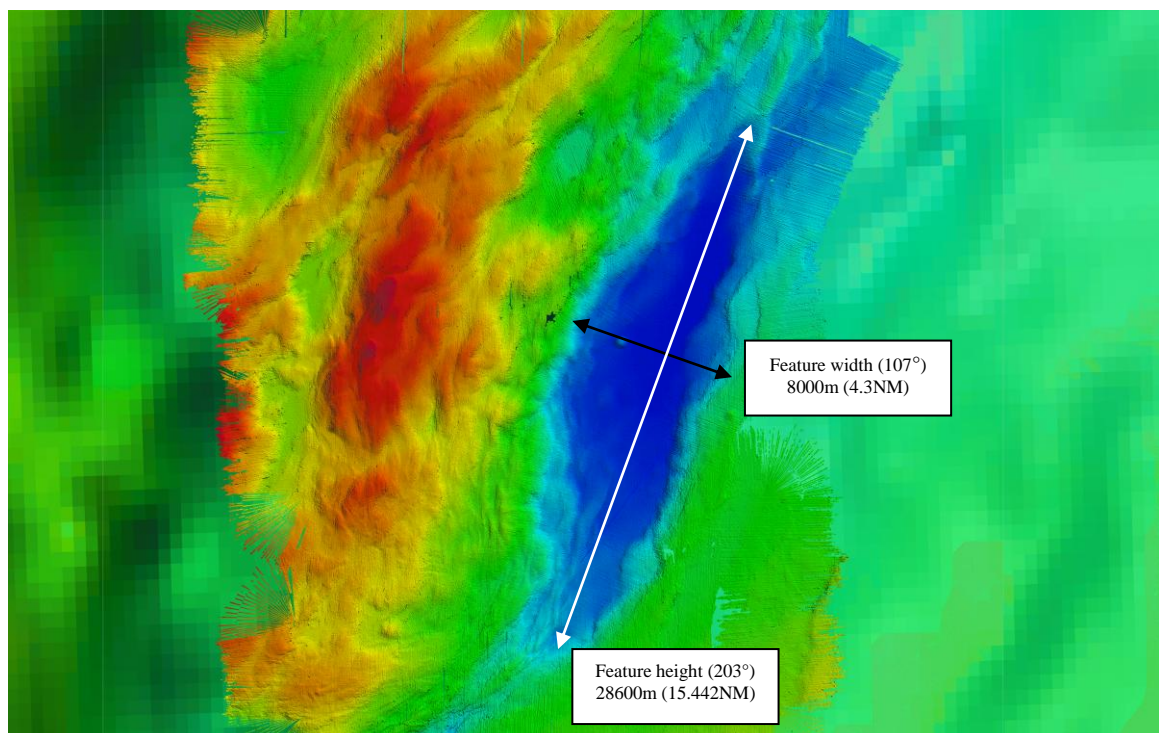


Above: Featured proposed as Crean Deep

	Lat. (e.g. 63°32.6'N)		Long. (e.g. 046°21.3'W)			
	Lat DD MM.MMM	Lon DD MM.MMM	Lat DD.DDD	Lon DD.DDD	Lat DD MM SS.SS	Lon DD MM SS.SS
Point 1	S 36 56.961	W 179 36.652	-36.949350	-179.610867	S 36°56.961	W179°36.652
Point 2	S 37 00.428	W 179 36.175	-37.007133	-179.602917	S 37°00.428	W179°36.175
Point 3	S 37 08.099	W 179 39.931	-37.134983	-179.665517	S 37°08.099	W179°39.931
Point 4	S 37 11.129	W 179 42.679	-37.185483	-179.711317	S 37°11.129	W179°42.679
Point 5	S 37 11.270	W 179 44.446	-37.187833	-179.740767	S 37°11.270	W179°44.446
Point 6	S 37 10.212	W 179 45.914	-37.170200	-179.765233	S 37°10.212	W179°45.914
Point 7	S 37 03.409	W 179 44.135	-37.056817	-179.735583	S 37°03.409	W179°44.135
Point 8	S 37 00.335	W 179 42.352	-37.005583	-179.705867	S 37°00.335	W179°42.352
Point 9	S 37 57.231	W 179 38.814	-37.953850	-179.646900	S 37°57.231	W179°38.814
Point 10	S 37 56.984	W 179 36.652	-37.949733	-179.610867	S 37°56.984	W179°36.652



<b>Feature Description:</b>	Maximum Depth:	5405m	Steepness :	
	Minimum Depth :	4805m	Shape :	Polygon (shown above)
	Total Relief :	400m	Dimension/Size :	28600m 203° 15.442NM  4.321 NM 107.945° 8003m



<b>Associated Features:</b>	
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<b>Chart/Map References:</b>	Shown Named on Map/Chart:	No
	Shown Unnamed on Map/Chart:	No
	Within Area of Map/Chart:	NZ20022W 2 <sup>nd</sup> Edition 08/30/2012

**Reason for Choice of Name** (if a person, state how associated with the feature to be named):



I have proposed to name the feature detailed above in honor of the Irish seaman and Antarctic explorer Tom Crean (20<sup>th</sup> July 1877 – 27<sup>th</sup> July 1938) from County Kerry. I have included a detailed description of Crean's life and role in Antarctic exploration below.

I have chosen DEEP as per Publication B-6 Edition 4.1.0, September 2013

"A localized depression within the confines of a larger feature, such as a TROUGH, BASIN or TRENCH."

This feature is located at the start of the Kermadac Trench

Crean was a member of three of the four major British expeditions to Antarctica during the Heroic Age of Antarctic Exploration, including Robert Falcon Scott's 1911–13 Terra Nova Expedition, which saw the race to reach the South Pole lost to Roald Amundsen and ended in the deaths of Scott and his polar party. During this expedition Crean's 35 statute miles (56 km) solo walk across the Ross Ice Shelf to save the life of Edward Evans led to him receiving the Albert Medal.

Crean had left the family farm near Annascaul to enlist in the British Royal Navy at the age of 15. In 1901, while serving on HMS Ringarooma in New Zealand, he volunteered to join Scott's 1901–04 British National Antarctic Expedition on Discovery, thus beginning his exploring career. After his return with the Terra Nova, Crean's third and final Antarctic venture was the Imperial Trans-Antarctic Expedition on Endurance led by Ernest Shackleton, in which he served as second officer. After Endurance became beset in the pack ice and sank, he was a participant in a dramatic series of events including months spent drifting on the ice, a journey in lifeboats to Elephant Island, and an open boat journey of 800 nautical miles (1,500 km) from Elephant Island to South Georgia. Upon reaching South Georgia, Crean was one of the party of three which undertook the first land crossing of the island, without maps or proper mountaineering equipment, to get aid.

Crean's contributions to these expeditions sealed his reputation as a tough and dependable polar traveller, and earned him a total of three Polar medals. After the Endurance expedition he returned to the Navy, and when his naval career ended in 1920 he moved back to County Kerry. In his home town of Annascaul, Crean and his wife Ellen opened a public house called the "South Pole Inn". He lived there quietly and unobtrusively until his death in 1938

Crean joined RRS Discovery in Lyttelton Harbour, New Zealand and hence the choice of this location in New Zealand waters. Lyttelton has played a large role as one of the main staging posts for Antarctic Expeditions over the last century. It is currently the 100<sup>th</sup> Anniversary of Shackleton's expedition on Endurance an expedition in which Crean played a major role.

#### Early life and career

Thomas Crean (generally known as Tom Crean) was born 20 July 1877, in the farming area of Gurtuchrane near the town of Annascaul in County Kerry, to Patrick Crean and Catherine Courtney. One of ten children, he attended the local Brackluin Catholic school, leaving at the age of 12 to lend much-needed help on the family farm. At the age of 15, Crean enlisted in the Royal Navy at the naval station in nearby Minard Inlet, possibly after an argument with his father. His enlistment as a boy second class is recorded in Royal Navy records on 10 July 1893, 10 days before his 16th birthday; lacking his parents' consent, he probably had to lie about his age to get in.

Crean's initial naval apprenticeship was aboard the training ship *Impregnable* at Devonport. In November 1894 he was transferred to *Devastation*. By his 18th birthday in 1895 Crean was serving in *Royal Arthur*, and rated ordinary seaman. Less than a year later he was in *Wild Swan* as an able seaman, and later joined the Navy's torpedo school ship, *Defiance*. By 1899, Crean had advanced to the rate of petty officer, second class and was serving in *Vivid*.

In February 1900 Crean was posted to the torpedo vessel *Ringarooma*, which was part of the Royal Navy's New Zealand Squadron based in the South Island. On 18 December 1901 he was disgraced from petty officer to able seaman for an unspecified misdemeanor. In December 1901 the *Ringarooma* was ordered to assist Robert Falcon Scott's ship *Discovery* when it was docked at Lyttelton Harbour before embarking on the British National Antarctic Expedition to Antarctica. When an able seaman of Scott's ship deserted after striking a petty officer a replacement was required; Crean volunteered, and was accepted.

### Discovery Expedition, 1901–1904

Discovery sailed for the Antarctic on 21 December 1901, and seven weeks later, on 8 February 1902, arrived in McMurdo Sound, where she anchored at a spot which was designated "Hut Point". Here the men established the base from which they would launch scientific and exploratory sledging journeys. Crean proved to be one of the most consistent man-haulers in the party; over the expedition as a whole only seven of the 48-member party logged more time in harness than Crean's 149 days. Crean had a good sense of humour and was well liked by his companions. Scott's second-in-command, Albert Armitage, wrote in his book *Two Years in the Antarctic* that "Crean was an Irishman with a fund of wit and an even temper which nothing disturbed." It was at this time that he formed close friendships with William Lashly and Edgar Evans: all three would establish themselves as seasoned polar explorers over the next decade.

Crean accompanied Lieutenant Michael Barne on three sledging trips across the Ross Ice Shelf, then known as the "Great Ice Barrier". These included the 12-man party led by Barne which set out on 30 October 1902 to lay depots in support of the main southern journey undertaken by Scott, Shackleton and Edward Wilson. On 11 November the Barne party passed the previous furthest south mark, set by Carsten Borchgrevink in 1900 at 78°50'S, a record which they held briefly until the southern party itself passed it on its way to an eventual 82°17'S.

During the Antarctic winter of 1902 Discovery became locked in the ice. Efforts to free her during the summer of 1902–03 failed, and although some of the expedition's members (including Ernest Shackleton) left in a relief ship, Crean and the majority of the party remained in the Antarctic until the ship was finally freed in February 1904. After returning to civilization, Crean was promoted to petty officer, first class, on Scott's recommendation.

### After the Discovery Expedition, 1905–10

Crean came back to regular duty at the naval base at Chatham, Kent, serving first in *Pembroke* in 1904 and later transferring to the torpedo school on *Vernon*. Crean had caught Captain Scott's attention with his attitude and work ethic on the Discovery Expedition, and in 1906 Scott requested that Crean join him on *Victorious*. Over the next few years Crean followed Scott successively to *Albemarle*, *Essex* and *Bulwark*. By 1907 Scott was planning his second expedition to the Antarctic. Meanwhile Ernest Shackleton's British Antarctic Expedition, 1907–09, despite reaching a new furthest south record of 88°23'S, had failed to reach the South Pole. Scott was with Crean when the news of Shackleton's near miss became public; it is recorded that Scott observed to Crean: "I think we'd better have a shot next."

### Terra Nova Expedition, 1910–13

Scott held Crean in high regard, so he was among the first people Scott recruited when planning the Terra Nova Expedition. Crean was one of the few men in the party with polar experience. His first major contribution to the expedition was as part of the 13-man party who laid "One Ton Depot" 130 statute miles (210 km) from Hut Point, the depot being named because of the large amount of food and equipment cached there. On the return trip to the expedition's base at Cape Evans Crean, with Apsley Cherry-Garrard and Lieutenant Henry "Birdie" Bowers, experienced near-disaster when they camped on unstable sea ice. During the night the ice broke up, leaving the men adrift on an ice floe and separated from their sledges. Crean probably saved the men's lives by leaping from floe to floe until he reached the Barrier edge and was able to get help.

Crean was one of the large group that departed with Scott in November 1911 for the attempt at the South Pole. This journey had three stages: 400 statute miles (640 km) across the Barrier, 120 statute miles (190 km) up the heavily crevassed Beardmore Glacier to an altitude of 10,000 feet (3,000 m) above sea level, and then another 350 statute miles (560 km) to the Pole. Crean and William Lashly, along with Lieutenant Edward Evans, formed the final support party which accompanied Scott and his team to 87°32'S, 168 statute miles (270 km) from the Pole. Here, on 4 January 1912, Crean's party was ordered to return to base while Scott, Edgar Evans, Wilson, Bowers and Lawrence Oates continued towards the Pole. Crean's biographer Michael Smith suggests that Crean should have been selected for the polar party in the place of Edgar Evans, who was weakened by a recent hand injury (of which Scott was unaware). Crean, considered one of the toughest men in the expedition, had led a pony across the Barrier and had thus been saved much of the hard labour of man-hauling. Scott's critic and biographer Roland Huntford records that the surgeon Edward L Atkinson, who had accompanied the southern party to the top of the Beardmore, had recommended either Lashly or Crean for the polar party rather than Edgar Evans. After two months of effort to reach this point, Crean apparently wept at the prospect of having to turn back so close to the goal.

Crean, Lashly and Evans now faced a 700-statute-mile (1,100 km) journey back to Hut Point. Soon after heading north, the party lost the trail back to the Beardmore Glacier, and were faced with a long detour around a large icefall where the plateau tumbles down onto the glacier. With food supplies short and needing to reach their next supply depot, the group made the decision to slide on their sledge, uncontrolled, down the icefall. The three men slid 2,000 feet (600 m), dodging crevasses up to 200 feet (61 m) wide, and ending their descent by overturning on an ice ridge. Evans later wrote: "How we ever escaped entirely uninjured is beyond me to explain".

The gamble at the icefall paid off, and the men reached their depot two days later. However, they had

great difficulty navigating down the glacier. Lashly wrote: "I cannot describe the maze we got into and the hairbreadth escapes we have had to pass through." In his attempts to find the way down, Evans removed his goggles and subsequently suffered agonies of snow blindness that made him into a passenger. When the party was finally free of the glacier and on the level surface of the Barrier, Evans began to display the first symptoms of scurvy. By early February he was in great pain, his joints were swollen and discoloured, and he was passing blood. Through the efforts of Crean and Lashly the group struggled towards One Ton Depot, which they reached on 11 February. At this point Evans collapsed; Crean thought he had died and, according to Evans's account, "his hot tears fell on my face". With well over 100 statute miles (160 km) to travel before the safety of Hut Point, Crean and Lashly began hauling Evans on the sledge, "eking out his life with the last few drops of brandy that they still had with them". On 18 February they arrived at Corner Camp, still 35 statute miles (56 km) from Hut Point, with food running low. With only one or two days' food rations left, but still four or five days' man-hauling to do, they decided that Crean should go on alone to fetch help. With only a little chocolate and three biscuits to sustain him, without a tent or survival equipment, Crean walked the distance to Hut Point in 18 hours, arriving in a state of collapse. He reached safety just ahead of a fierce blizzard, which probably would have killed him, and which delayed the rescue party by a day and a half. The rescue was successful, however, and Lashly and Evans were both brought to base camp alive. Crean modestly played down the significance of his feat of endurance. In a rare written account, he wrote in a letter: "So it fell to my lot to do the 30 miles for help, and only a couple of biscuits and a stick of chocolate to do it. Well, sir, I was very weak when I reached the hut."

Scott's party failed to return. The winter of 1912 at Cape Evans was a sombre one, with the knowledge that the polar party had undoubtedly perished. Frank Debenham wrote that "in the winter it was once again Crean who was the mainstay for cheerfulness in the now depleted mess deck part of the hut." In November 1912, Crean was one of the 11-man search party that found the remains of the polar party. On 12 November they spotted a cairn of snow, which proved to be a tent against which the drift had piled up. It contained the bodies of Scott, Wilson, and Bowers. Crean later wrote, referring to Scott in understated fashion, that he had "lost a good friend".

On 12 February 1913 Crean and the remaining crew of the Terra Nova arrived in Lyttelton, New Zealand, and shortly after returned to England. At Buckingham Palace the surviving members of the expedition were awarded Polar Medals by King George and Prince Louis of Battenberg, the First Sea Lord. Crean and Lashly were both awarded the Albert Medal, 2nd Class for saving Evans's life, these were presented by the King at Buckingham Palace on 26 July 1913. Crean was promoted to the rank of chief petty officer, retroactive to 9 September 1910

#### **Imperial Trans-Antarctic Expedition (Endurance Expedition), 1914–17**

Ernest Shackleton knew Crean well from the Discovery Expedition and also knew of his feats on Scott's last expedition. Like Scott, Shackleton deeply trusted Crean: he was worth, in Shackleton's own word, "trumps". Crean joined Shackleton's Imperial Transantarctic Expedition on 25 May 1914, as second officer, with a varied range of duties. In the absence of a Canadian dog-handling expert who was hired but never appeared, Crean took charge of one of the dog-handling teams, and was later involved in the care and nurture of the pups born to one of his dogs, Sally, early in the expedition.

On 19 January 1915 the expedition's ship, the *Endurance*, was beset in the Weddell Sea pack ice. In the early efforts to free her, Crean narrowly escaped being crushed by a sudden movement in the ice. The ship drifted in the ice for months, eventually sinking on 21 November. Shackleton informed the men that they would drag the food, gear, and three lifeboats across the pack ice to Snow Hill or Robertson Island, 200 statute miles (320 km) away. Because of uneven ice conditions, pressure ridges, and the danger of ice breakup which could separate the men, they soon abandoned this plan: the men pitched camp and decided to wait. They hoped that the clockwise drift of the pack would carry them 400 statute miles (640 km) to Paulet Island where they knew there was a hut with emergency supplies.<sup>[50]</sup> But the pack ice held firm as it carried the men well past Paulet Island, and did not break up until 9 April. The crew then had to sail and row the three ill-equipped lifeboats through the pack ice to Elephant Island, a trip which lasted five days. Crean and Hubert Hudson, the navigating officer of the *Endurance*, piloted their lifeboat with Crean effectively in charge as Hudson appeared to have suffered a breakdown.

On reaching Elephant Island, Crean was one of the "four fittest men" detailed by Shackleton to find a safe camping-ground. Shackleton decided that, rather than waiting for a rescue ship that would probably never arrive, one of the lifeboats should be strengthened so that a crew could sail it to South Georgia and arrange a rescue. After the party was settled on a penguin rookery above the high-water mark, a group of men led by ship's carpenter Harry McNish began modifying one of the lifeboats—the *James Caird*—in preparation for this journey, which Shackleton would lead. Frank Wild, who would be in command of the party remaining on Elephant Island, wanted the dependable Crean to stay with him; Shackleton initially agreed, but changed his mind after Crean begged to be included in the boat's crew of six. The 800-nautical-mile (1,500 km) boat journey to South Georgia, described by polar historian Caroline Alexander as one of the most extraordinary feats of seamanship and navigation in recorded history, took 17 days through gales and snow squalls, in heavy seas which navigator Frank Worsley described as a "mountainous westerly swell". Setting off on 24 April 1916, thanks to the navigational skills of Worsley, armed with just the barest equipment, they reached South Georgia on 10 May 1916. Shackleton, in his later account of the journey, recalled Crean's tuneless singing at the tiller: "He always sang when he was steering, and nobody ever discovered what the song was ... but somehow it was cheerful".

	<p>They made their South Georgia landfall on the uninhabited southern coast, having decided that the risk of aiming directly for the whaling stations on the north side was too great; if they missed the island to the north they would be swept out into the Atlantic Ocean. The original plan was to work the James Caird around the coast, but the boat's rudder had broken off after their initial landing, and some of the party were, in Shackleton's view, unfit for further travel. The three fittest men—Shackleton, Crean, and Worsley—were therefore required to trek 30 statute miles (48 km) across the island's glaciated surface, in a hazardous 36-hour journey to the nearest manned whaling station. This trek was the first recorded crossing of the mountainous island, completed without tents, sleeping bags, or map—their only mountaineering equipment was a carpenter's adze, a length of alpine rope, and screws from the James Caird hammered through their boots to serve as crampons.[60] They arrived at the whaling station at Stromness, tired and dirty, hair long and matted, faces blackened by months of cooking by blubber stoves—"the world's dirtiest men", according to Worsley. They quickly organized a boat to pick up the three on the other side of South Georgia, but thereafter it took Shackleton three months and four attempts by ship to rescue the other 22 men still on Elephant Island.</p> <p><b>Later life</b></p> <p>After returning to Britain in November 1916, Crean resumed naval duties. On 15 December 1916 he was promoted to the rank of warrant officer (as a boatswain), in recognition of his service on the <i>Endurance</i> and was awarded his third Polar Medal. On 5 September 1917 Crean married Ellen Herlihy of Annascaul. For the remainder of the First World War he served first at the Chatham barracks, and then in the depot ship <i>Colleen</i> at Queenstown, Ireland.</p> <p>In early 1920, Shackleton was organising another Antarctic expedition, later to be known as the Shackleton-Rowett Expedition. He invited Crean to join him, along with other officers from the <i>Endurance</i>. By this time, however, Crean was married, his second daughter had arrived, and he had plans to open a business following his naval career. He turned down Shackleton's invitation.</p> <p>On his last naval assignment, with <i>Hecla</i>, Crean suffered a bad fall which caused lasting effects to his vision. As a result, he was retired on medical grounds on 24 March 1920. He and Ellen opened a small public house in Annascaul, which he called the South Pole Inn. The couple had three daughters, Mary, Kate, and Eileen, although Kate died when she was four years old.</p> <p>On 25 April 1920 Crean's brother, Cornelius, a policeman in the Royal Irish Constabulary was killed along with another RIC officer in an Irish Republican Army (IRA) ambush in Ballinspittle, County Cork during the Irish War of Independence.</p> <p>Throughout his life, Crean remained an extremely modest man. When he returned to Kerry, he put all of his medals away and never again spoke about his experiences in the Antarctic. Indeed, there is no reliable evidence of Crean giving any interviews to the press. It has been speculated that this may have been because Kerry had long been a centre for Irish Republicanism, and it would have been inappropriate for an Irishman to speak of his achievements on British polar expeditions. In fact, Crean and his family were once the victims of a Black and Tan (British paramilitary) raid during the War of Independence. The raiders ransacked his property and the Creans felt threatened until the Black and Tans happened across a framed photo of Crean in Royal Navy dress uniform and medals. They then left his inn.</p> <p>In 1938 Crean became ill with a burst appendix. He was taken to the nearest hospital in Tralee, but as no surgeon was available to operate, he was transferred to the Bon Secours Hospital in Cork where his appendix was removed. Because the operation had been delayed, an infection developed, and after a week in the hospital he died on 27 July 1938, shortly after his sixty-first birthday. He was buried in his family's tomb at the cemetery in Ballynacourty.</p>
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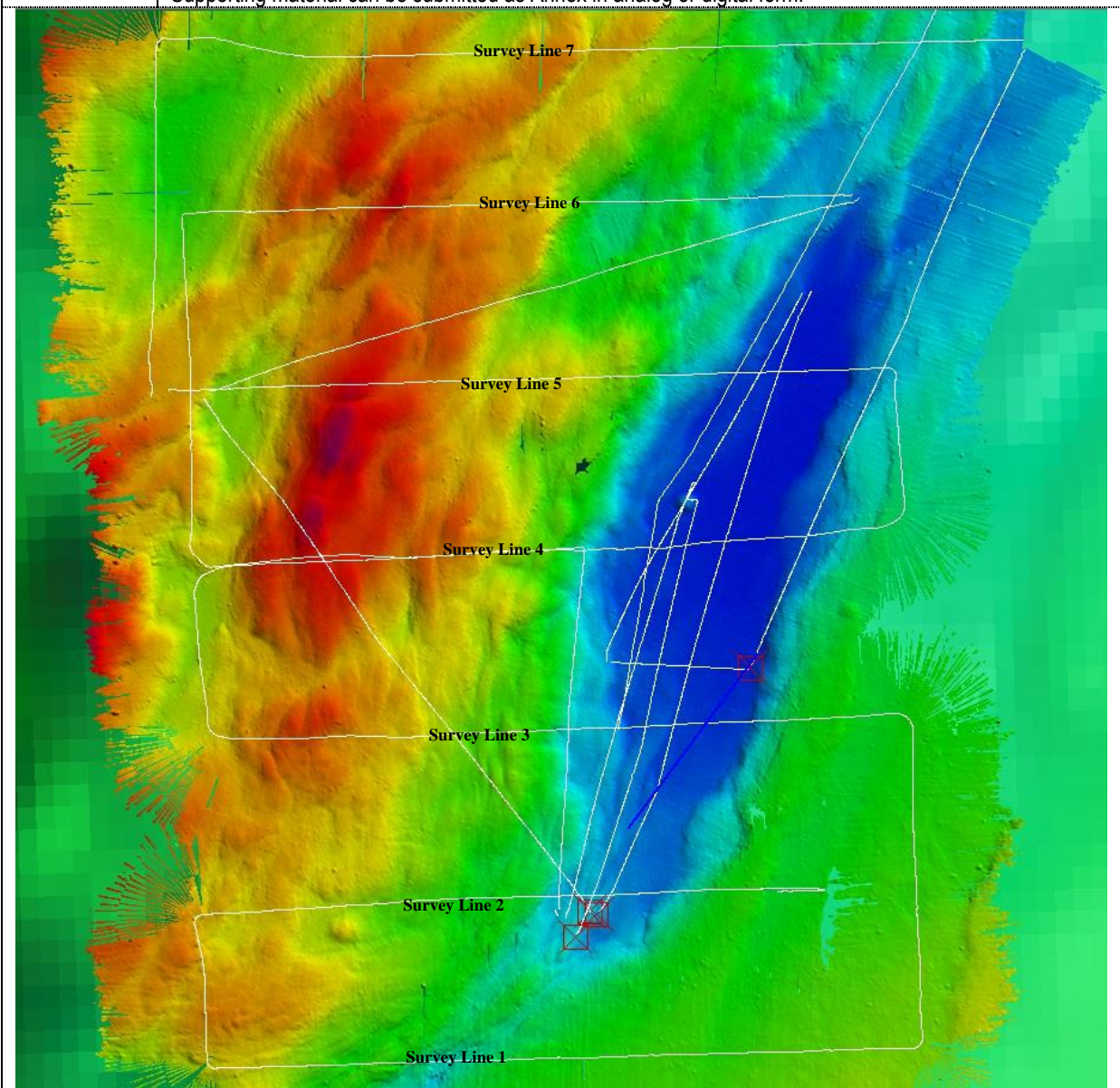
<b>Discovery Facts:</b>	<b>Discovery Date:</b> <b>Discoverer (Individual, Ship):</b>	15 <sup>th</sup> April 2014 Leighton Rolley (Hydrographer) – (Employee of Schmidt Ocean Institute) Embarked onboard <i>RV Thomas G Thompson</i>
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<b>Supporting Survey Data, including Track Controls:</b>	<b>Date of Survey:</b> <b>Survey Ship:</b>	15 <sup>th</sup> April 2014 <b>Vessel:</b> <i>R/V Thomas G Thompson</i> <b>Call Sign:</b> KTDQ <b>IMO:</b> 8814419 <b>Home Port:</b> Seattle, WA <b>Class:</b> ABS <b>Class No:</b> 9102782 <b>Operator:</b> University of Washington School of Oceanography, Seattle, WA 98195
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Sounding Equipment:	EM302 Multibeam (Kongsberg) - 432 Beams
Type of Navigation:	POSMV 320 S/N 2805 DGPS
Estimated Horizontal Accuracy (nm):	DGPS Navigation from Seapath SP320 Latitude Accuracy: 0.55m Longitude Accuracy: 0.489m
Survey Track Spacing:	

Survey Lines						
Line No	Start		End		Length	Spacing
	Latitude	Longitude	Latitude	Longitude		
Survey Line 1	S 37 12.597207	W 179 36.319057	S 37 12.597207	W 179 52.819833	13.181 nm	
Survey Line 2	S 37 09.757783	W 179 36.318361	S 37 09.757783	W 179 52.819148	13.189 nm	5252m
Survey Line 3	S 37 06.521334	W 179 36.318361	S 37 06.521334	W 179 52.819148	13.199 nm	5986m
Survey Line 4	S 37 03.282555	W 179 36.318361	S 37 03.282555	W 179 52.819148	13.208 nm	5990m
Survey Line 5	S 37 00.041446	W 179 36.318361	S 37 00.041446	W 179 52.819148	13.217 nm	5994m
Survey Line 6	S 36 56.798017	W 179 36.318361	S 36 56.798017	W 179 52.819148	13.227 nm	5999m
Survey Line 7	S 36 53.552269	W 179 36.318361	S 36 53.552269	W 179 52.819148	13.236 nm	6003m

Supporting material can be submitted as Annex in analog or digital form.



<b>Proposer(s):</b>	<b>Name(s):</b>	Leighton Rolley  156 St. Fagan's Road Fairwater, Cardiff Wales, UK CF5 3EU  Tel: UK 07886784890
	<b>Date:</b>	24th April 2014
	<b>E-mail:</b>	Leighton.r@soi-team.org
	<b>Organization and Address:</b>	Schmidt Ocean Institute
	<b>Concurren (name, e-mail, organization and address):</b>	Tim Shank Woods Hole Oceanographic Institution 2-34/2-40 Redfield Laboratory, MS#33 Woods Hole, MA 02543 USA Lab Phone: (001) 508 289 3761 Fax: (001) 508 457 2134

<b>Remarks:</b>	
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**NOTE :** This form should be forwarded, when completed :

- a) **If the undersea feature is located inside the external limit of the territorial sea :-**  
to your "National Authority for Approval of Undersea Feature Names" (see page 2-9) or, if this does not exist or is not known, either to the IHB or to the IOC (see addresses below);
- b) **If at least 50 % of the undersea feature is located outside the external limits of the territorial sea :-**  
to the IHB or to the IOC, at the following addresses :

International Hydrographic Bureau (IHB) 4, Quai Antoine 1er B.P. 445 MC 98011 MONACO CEDEX Principality of MONACO Fax: +377 93 10 81 40 E-mail: <a href="mailto:info@ihb.mc">info@ihb.mc</a>	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS France Fax: +33 1 45 68 58 12 E-mail: <a href="mailto:info@unesco.org">info@unesco.org</a>
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