



## 09 February 2017

## **Exploration Update Borroloola West Joint Venture**

## ASX Code: PMY ABN 43 107 159 713

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## **Highlights**

- Exploration work on the Borroloola West project to recommence.
- Sandfire Resources to maintain interest and fund 49% of all exploration costs towards the program (Pacifico 51%).
- Targets for diamond drill testing established at Coppermine Creek (copper cobalt silver), Mariner (zinc lead) and Berjaya (zinc lead).
- Conductivity tests on core containing semi-massive sulphides intersected in diamond core from Coppermine Creek to get underway next week potentially leading to a ground EM survey.

The Borroloola West Joint Venture ("BWJV") consists of 12 exploration licences and 1 mining licence (1,817 km²), and lies west and northwest of the world class McArthur River zinc-lead mine and Rox Resources' zinc-lead resource at the world class Teena deposit (figure 1). The parties to the BWJV are 51% Pacifico Minerals Limited ("Pacifico" or "Company") (ASX code: PMY) and 49% Sandfire Resources NL ("Sandfire") (ASX code: SFR).

Sandfire is supportive of the exploration program and will continue to contribute its 49% share of all exploration costs. Diamond and RC drilling is planned during the 2017 field season to test the Coppermine Creek (copper-cobalt-silver), Mariner (zinc-lead) and Berjaya (zinc-lead) prospects. Preparatory work, including a potential ground EM survey, are planned to commence when the Northern Territory period of heavy rains finishes.

Pacifico's reverse circulation drilling program in 2016 confirmed the continuity of stratabound copper mineralisation of Mount Isa Copper / Nifty deposit style at Coppermine Creek, with an intersection of 10m of 1.3% Cu in CCR08 (see ASX announcement 23 November 2016).

At the Mariner Prospect, the 2016 drilling intersected geochemically high lead values (21m of 1.0% Pb in MNR01: see ASX announcement 23 November 2016), indicating possible proximal hydromorphic dispersion from significant zinc-lead mineralisation in the underlying McArthur Group sediments.



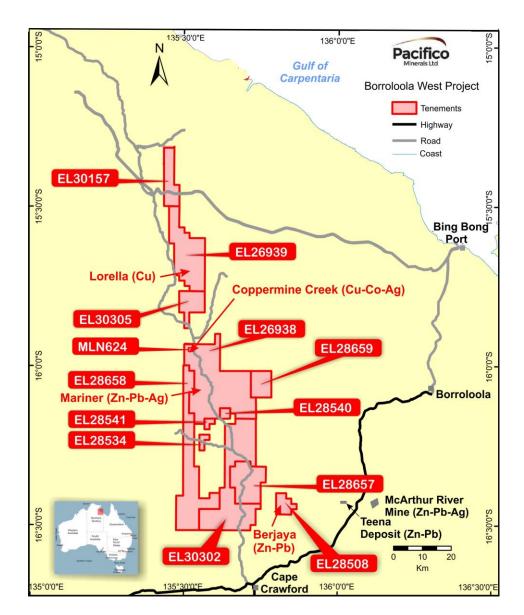


Figure 1: Borroloola West Project Tenements (Pacifico 51%, and Sandfire 49%) and location of prospects

## <u>Coppermine Creek (copper - cobalt, silver)</u>

The thickness, continuity and style of the copper (as well as cobalt and silver) mineralisation at Coppermine Creek are impressive. The mineralised zone, is spatially controlled by an evaporite horizon (figure 4) extending south and dipping gently from the copper mineralised at the Gordons Fault (figures 3 and 4).

The outcrop length of the mineralisation is 700m (figure 3). Applying a 0.3% Cu grade cut off, the average intersection thickness of the 12 holes is 9m, with a length weighted average intersection grade of 1.0% Cu (table 1).

There is potential for significant tonnages of much higher copper (and cobalt, silver) grades of stratabound Mount Isa/ Nifty style copper mineralisation at moderate depths of between 150m and 400m. The possibility of zones of higher grade copper mineralisation is supported by intersections of historical and previous Pacifico drilling, such as GPRC07 with 13m of 2.0% Cu, and CCD03 with 5m of 2.5% Cu, including 2m of 4.0% Cu (table 1).



The primary mineralisation consists mostly of veins, stringers and disseminations of chalcopyrite, with only minor pyrite (figure 2), indicating relatively simple metallurgy.



Figure 2: Drill core CCD03 – semi-massive chalcopyrite bands

Drilling also indicates there is potential for significant tonnage of near surface oxidised copper mineralisation (chalcocite and malachite) extending down to approximately 50m depth that may augment the oxidised copper mineralisation previously drilled out at the Lorella Prospect, 30 kilometres north of Coppermine Creek (figure 1). Pacifico will investigate its potential for on-site leaching. In the high carbonate host rocks an alternative leaching method (eg Glycine) would be evaluated in order to avoid excessive acid consumption.

Conductivity measurements of mineralised core containing semi-massive sulphides intersected in holes CCD02 and CCD03 (figure 4) as well as unmineralised drill core, will get underway next week and if the results are positive, ground EM lines will be conducted south of the Gordons Fault (figure 3) to further define the diamond drill targets below 150m to 400m of the overlying stratigraphy.

Drill Hole Number	From (m)	To (m)	Intersection Length (m)	Cu %	Co ppm	
CEC01 (MIM)	76	93	17	0.5	9	
MYD7 (BHP)	185	187	2	0.6	na	
GPRC01 (Carrington)	20	30	10	0.5	16	
GPRC04 (Carrington)	0	4	4	2.5	194	
GPRC05 (Carrington)	11	16	5	0.6	16	
GPRC07 (Carrington)	13	28	15	1.9	189	Including 15 to 28m – 13m @ 2.0% Cu
GPRC08 (Carrington)	28	34	6	0.8	159	
GPRC09 (Carrington)	20	31	11	1.2	239	
GPRC10 (Carrington)	7	10	3	1.2	9	
CCD02 (Pacifico)	147	152	5	0.8	8	
CCD03 (Pacifico)	68	73	5	2.5	4	Including 69 to 71m – 2m @ 4.0% Cu
CCR08 (Pacifico)	35	58	23	0.7	71	Including 48 to 51m – 3m @ 2.8% Cu

Table 1: Pacifico (CC series) and previous explorer's drill intersections of copper and cobalt through the stratabound evaporite zone, using a cut-off of 0.3% Cu

na = not analysed
MIM = Mount Isa Mines Ltd
BHP = BHP Exploration Pty Ltd
Carrington = Carrington Mines Ltd



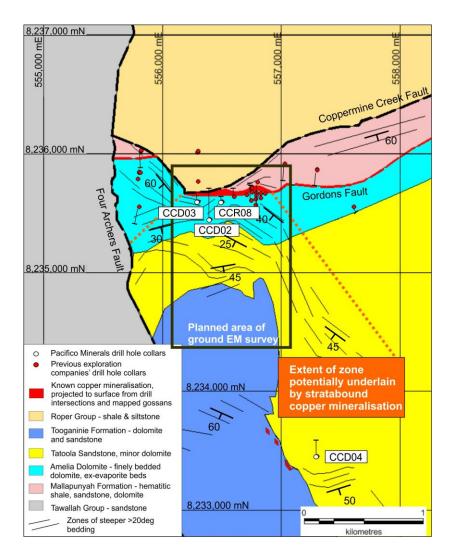


Figure 3: Coppermine Creek Prospect – Geological plan showing projected drill hole traces, copper mineralisation and planned extent of ground EM survey

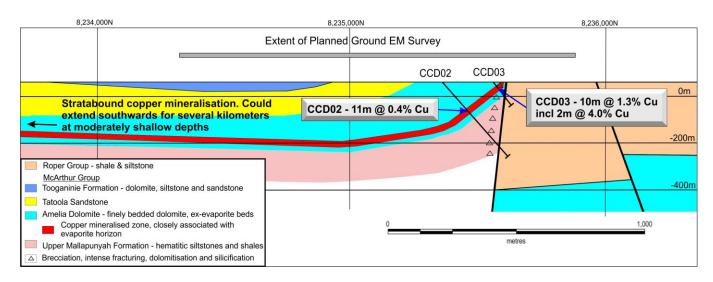


Figure 4: Coppermine Creek Prospect – north-south section showing probable extension of stratabound copper mineralisation southwards



## **Mariner** (zinc-lead)

Four RC holes were drilled by Pacifico during the 2016 field season (MNR01 to MNR04: sea ASX announcement 23 November 2016). The drilling demonstrates that oxidised lead mineralisation occurs at the base of the Roper Group. The basal unit of the Roper Group consists of sandstone, siltstone and chert breccia fragments in a clayey matrix.

Hole ID	From (m)	To (m)	Length	Pb
MNR01	6	27	21	1.0%
including	13	19	6	2.4%
MNR02	25	46	21	0.35%
MNR03	41	66	25	0.09%

Table 2: Lead intersections at Mariner

The lead mineralised zones are also slightly anomalous in zinc (up to 549ppm Zn over 1m interval). As the Roper Group contains no known primary mineralisation whatsoever regionally, it is likely that the lead and zinc originate from base metal mineralisation in the underlying McArthur Group and has moved by hydromorphic dispersion along the contact unconformity (figure 5).

Once the wet season is over, Pacifico's exploration team will carry out geological mapping and portable X-Ray Fluorescence ("pXRF") rock chip geochemistry over the area to the north-west of existing drill collars (figure 6), where the potential base metal mineralisation could lie, to better define the target zone, and culminating in diamond drilling to test the McArthur Group for sediment hosted, stratabound, zinc – lead mineralisation.

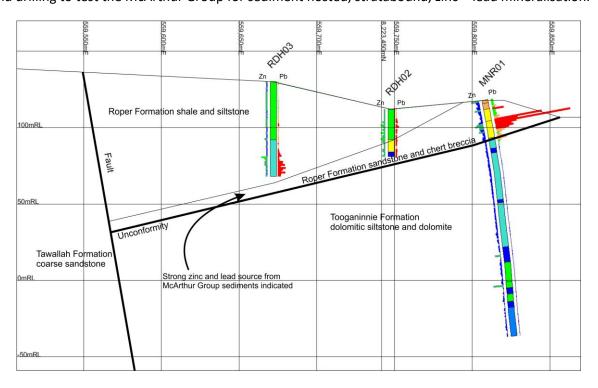


Figure 5: Section east-west through MNR01, also showing previous MIM percussion holes RDH02 and RDH03



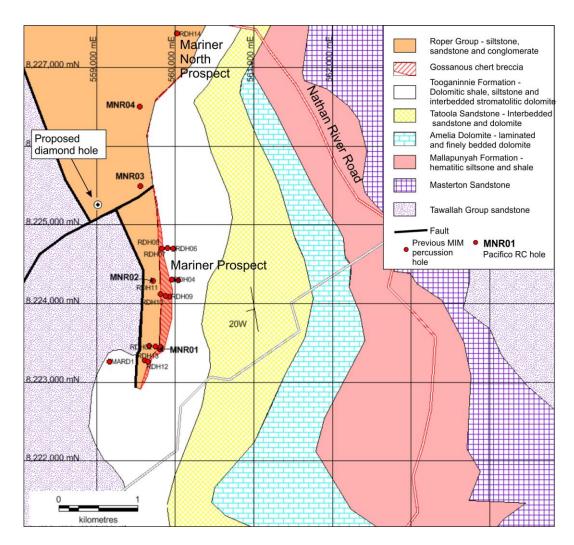


Figure 6: Mariner Prospect – Updated interpreted geological plan showing historical and Pacifico (MNR series) drill collars

## Berjaya (zinc-lead)

The Berjaya tenement covers several kilometers of suboutcropping, gently dipping Barney Creek Formation (figure 7) which is the host to the McArthur River and Teena zinc-lead deposits. Reverse circulation drilling by Pacifico in 2016 intersected oxidised Barney Creek Formation in drill hole BJR01 (see ASX announcement 23 November 2016). Diamond drilling is planned to test a flat lying low resistivity zone in VTEM flown by Pacifico, 1km to the north of BJR01.

When the Northern Territory period of heavy rains finishes Pacifico's exploration team will be carrying out geological mapping and geochemical rock chip sampling to further refine the position of the planned diamond drill hole.



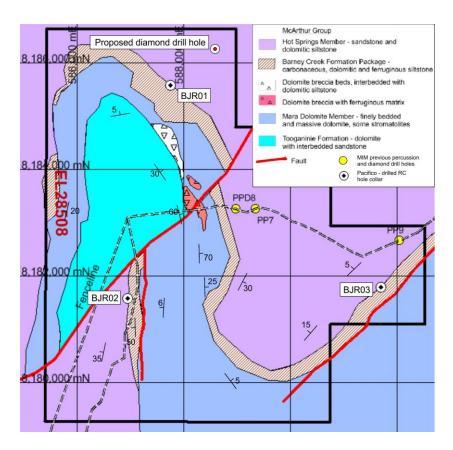


Figure 7: Berjaya EL28508 – Geology and RC drill hole collars

## For further information or to be added to our electronic mailing list please contact:

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### **About Pacifico Minerals Ltd**

Pacifico Minerals Ltd ("Pacifico") (ASX: PMY) is a Western Australian based exploration company with interests in Australia and Colombia. In Australia the company is focussed on advancing the Borroloola West project in the Northern Territory. The Borroloola West Project is a Joint Venture with Sandfire Resources NL (ASX: SFR) with Sandfire retaining 49% and Pacifico holding 51% and operator of the Joint Venture. The Borroloola West project covers an outstanding package of ground north-west of the McArthur River Mine (the world's largest producing zinc – lead mine) with high potential for the discovery of world class base metal deposits. In Colombia the company is focussed on advancing its Berrio Gold Project. Berrio is situated in the southern part of the prolific Segovia Gold Belt and is characterised by a number of operational, artisanal-scale mines. The project is 35km from the Magdalena River which is navigable to the Caribbean Sea and has excellent infrastructure in place including hydro power, sealed roads, a water supply and telecommunications coverage.

#### **Competent Person Statement**

The information in this announcement that relates to the Borroloola West Project is based on information compiled by Mr David Pascoe, who is a Member of the Australian Institute of Geoscientists. Mr Pascoe is contracted exclusively to Pacifico Minerals Limited. Mr Pascoe has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pascoe consents to the inclusion in this announcement of the matters based on information in the form and context in which it appears.



# JORC Code, 2012 Edition – Table 1 report

# Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	The methods of sampling the drillholes reported have been previously described. See ASX Announcements of 14/05/15, 06/08/15 and 23/11/16.
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	No new drilling
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	No new drilling
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	No new drilling



Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	No new drilling
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	No new drilling
Verification of sampling and assaying  Location of	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> <li>Accuracy and quality of surveys used to locate drill</li> </ul>	<ul> <li>Previous exploration data and analyses appear reasonable in comparison with reported Pacifico data and are taken at face value (table 1). This data however would not be used in any future resource estimations.</li> <li>No new drilling</li> </ul>
data points	<ul> <li>holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	_
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Only exploration drilling,</li> </ul>
Orientation of data in relation to	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul> <li>Drillholes are approximately at right angles to the dominant strike directions of the fault and to bedding. Once a</li> </ul>



Criteria	JORC Code explanation	Commentary
geological structure	<ul> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	complete understanding is achieved, corrections will be made to estimate true widths. Any intersections described refer to down hole lengths.
Sample security	The measures taken to ensure sample security.	No new drilling
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>None required at this preliminary exploration stage.</li> </ul>



# **Section 2 Reporting of Exploration Results** (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Borroloola West JV Project consists of EL's 26939, 30305, 26938, 28659, 28540, 28541, 28534, 28658, 30302, 28657, 28508, MLN 624 and ELA 26599. The Borroloola West Project is a joint venture with Sandfire. Pacifico is the operator. Some of the licence areas are covered by the Limmen National Park and permissions for exploration have been obtained from both the traditional owners and the Parks and Wildlife Commission.</li> <li>Berjaya (EL28508) lies on McArthur River Station and permissions for exploration have been obtained from the traditional owners and Glencore.</li> <li>Granted licences - no known security of tenure issues or anticipated impediments to operate in the area.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Various companies have explored the area now covered by the Borroloola West Project including Sandfire Resources NL, Mount Isa Mines Ltd and BHP Exploration Pty Ltd.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The Borroloola West Project is considered prospective for sediment hosted massive sulphide zinc lead silver deposits and structurally controlled or stratabound copper deposits in the Proterozoic sedimentary sequence. Manganese deposits may be present in Cretaceous sediments. Diamonds may occur in concealed kimberlitic pipes.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract</li> </ul>	No new drilling



Criteria	JORC Code explanation	Commentary
	from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>All analyses were taken over 1m. No grades have been cut. Aggregations of length weighted grades and cut-off grades are described with the intercepts (table 1).</li> <li>No metal equivalent values have been used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Down-hole lengths only have been reported. The geometry of the mineralisation is known with insufficient certainty to estimate true widths.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Maps and sections are provided (figures 2 to 6). Significant intercepts are shown in Tables 1 and 2.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	All significant results are reported
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other substantive exploration data
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further step-out diamond drilling targets are described and shown on maps.</li> </ul>