



## **Gear & Equipment for Ojos del Salado Expedition**

If we are well prepared physically and technically, success in mountaineering expeditions in the Andes and in the Himalayas depends on three fundamental factors in equal parts:

- Health
- The weather
- The technical equipment and the appropriate clothing.

Health and especially the weather are more random, and we cannot control them. A winning strategy will then be to manage, plan, and carefully choose the equipment and clothing that we will wear on this expedition.

The purpose of this article is to provide accurate and up-to-date information on the appropriate equipment and clothing to maximize your chances of reaching the summit.

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### **The Duffel Bag**

The legendary expedition bag by North Face has been replicated by other brands, such as Patagonia, Camp, Helly Hansen, Mammut, among other. They have been conceived to protect your luggage from rough transport, such as the pick-up of a 4x4, mules or yaks. Using this bag, you make sure your belongings are safe from dust, water.

Choosing the right size you should be able to fit everything inside. For Andean and Himalayan expeditions, you will need the 132 or 150 liters bag. They are expensive but have a very long life. An absolutely essential item to transport and protect your belongings in the most extreme conditions. If you don't find the original TNF duffel bag, make sure you choose one that is large and sturdy with a good zipper.

**We recommend:**

- The North Face BASE CAMP DUFFEL-XL 132 L. With lifetime warranty.
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### **The Sleeping Bag**

An essential item and not an easy choice. You must bring one that goes minimum to -20C/-4F comfort. The ones we recommend are for -40F/-40C. The choice of the sleeping bag depends on your size and gender. It needs to be long and big enough, so you don't touch the bottom with your feet. There are women's sizes for ladies because if you use a too big sleeping bag, you won't be able to warm it up with the heat generated by your body.

Finally, the sleeping needs to come with a **Compression Stuff Sack**. Its purpose is to shrink your sleeping bag into the smallest size possible.

**We recommend:**

- INFERNO -40F/-40C from North Face summit series
  - TRILOGY SUMMIT from Millet
  - Phantom™ GORE-TEX INFINIUM -40F/-40C, from Mountain Hardwear
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### **The Sleeping Bag Liner**

In case you have a -20C / -4F sleeping bag, you will need the liner for extra warmth. Choose one in silk and pay attention to the size: it needs to be large enough for you to fit comfortable inside. If you still need a warmer kind, you will find liners in fleece and microfleece, or even thermolite material.

There are two kinds of liners: Mummy shaped liners designed to slip inside your sleeping bag. Rectangular liners (also known as **travel sheets**) designed for use on their own or inside a rectangular sleeping bag. Our advice is to look for a mummy shaped, for a better fit with your sleeping bag.

**We recommend:**

- Cocoon Silk Mummy Liner. Added warmth: 5 C / 10 F
- Cocoon Merino Wool Mummy Liner. Added warmth: 7 C / 10 F
- Sea to Summit Thermolite Reactor Extreme Sleeping Bag Liner. Added warmth: 14 C / 25 F

### **The Sleeping Pad /Therm-a-Rest**

In the Ojos del Salado, Lulllaillaco, Parinacota, and similar kinds of overland/climbing expeditions, ChileMontana provides a thick 5 cm / 2 inches foam mattress. It will be used in all camps where the expedition arrives with the 4x4 vehicles. What you need to bring is your foam or inflatable mountaineering sleeping pad. It will be used every night over our mattress in the base camp and all nights in the high camps, where our mattress won't be available.

It needs to be a technical sleeping pad, able to provide comfort and insulation from the ground in rocky and snowy terrains. You may choose to bring two of them for extra comfort: one foam pad and one inflatable. The best choice would be the two pads we recommend below. If you choose to bring just one, privilege the Prolite. It needs to come with the compact stuff sack and the repair kit.

#### **We recommend:**

- Z Lite SOL™ Foam Sleeping Pad from Therm-a-Rest
  - ProLite™ Sleeping Pad from Therm-a-Rest
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### **The Mountaineering boots**

For the 6000 of the Andes, such as Ojos del Salado, Aconcagua, Lulllaillaco, and Tupungato, among others, double boots are mandatory. We strongly recommend choosing one of the alternatives our guides have extensively tested in our expeditions and listed here. Ideally fully broken before the expedition. Please keep in mind that any no double boot won't be warm enough for the Ojos del Salado summit day.

Very often, our guests ask if the boots for the 8000 would be fine. Regretfully those are not at all suitable for Ojos del Salado climb. They have been designed for a totally different kind of terrain and for even lower temperatures. Generally speaking, they are also heavier than the boots we recommend for Ojos del Salado or any other 6000 in the Andes.

#### **We recommend:**

- First option: Spantik or Baruntse from Lasportiva
  - Second option: Phantom 6000 from Scarpa
  - Third option: G2 Evo from Lasportiva
  - Fourth option: Phantom Tech from Scarpa
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### **The Expedition Down Parka**

An essential garment that will keep you warm every evening in camps and on the summit day, when temperatures may reach -25°C / -13°F, often worsened by the wind. Having the right Down Parka on summit day may have a crucial role in the success and for your safety. Its primary purpose is to keep the body temperature in extreme conditions.

At almost 7000 meters over sea level, on a cold and windy day, not only the cold plays a role. Your body will be in a fragile balance in terms of oxygenation. Hypoxia and dehydration increase the risk of hypothermia

and frostbite. Therefore, the right choice for this item is crucial. This parka needs to have a hood and hooks to hang the mittens.

#### **We recommend:**

- MXP TRILOGY DOWN JKT expedition down jacket from Millet
- Absolute Zero Down Parka from Mountain Hardwear
- Belay Parka Summit Series L6 Futurelight from The North Face

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### **The Down Mittens**

An essential garment that will protect your hands from frostbite on the summit day, when temperatures may reach -25°C / -13°F, often worsened by the wind. Having the right Down Mittens on summit day may have a crucial role in the success and for your safety.

At almost 7000 meters over sea level, on a cold and windy day, not only the cold plays a role. Your body will be in a fragile balance in terms of oxygenation. Hypoxia and dehydration increase the risk of hypothermia and frostbite. Therefore, the right choice for this item is crucial.

#### **We recommend:**

- Himalayan Mitt from The North Face
- Outdoor Research Alti Mittens
- High Exposure™ Gore-Tex® Mitt from Mountain Hardwear
- Black Diamond Absolute Mitt

[See more about down mittens](#)



### **The Sunglasses**

An essential item, you will need specialized high-performance eyewear. The primary purpose is to protect your eyes from UV rays (A, B, and C). Choose a pair that blocks the sun from both sides. Bring also a spare pair of sunglasses. Look for lens protection category 3 or 4 for intense light levels.

Bring them in a proper glasses case to keep them safe while traveling in the backpack or the duffel bag. Don't forget the anti-fog liquid to avoid your sunglasses to get fogged.

#### **We recommend:**

- Shield from Julbo
  - Monterosa from Julbo
  - Sherpa from Julbo
  - Summit CBSUM2 from CEBE
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### **The Ski Goggles**

We advise bringing a pair of ski goggles to protect your eyes from extreme cold and wind conditions on summit days. Bring them in a proper glasses case to keep them safe while traveling in the backpack or the duffel bag. Don't forget the anti-fog liquid to avoid your sunglasses to get fogged.

#### **We recommend:**

- Fateful CBG295 from CEBE
  - Sniper from Julbo
  - Similar goggles from Oakley, Salomon or equivalent brands.
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### **The Backpack**

This is a 40-50 liters backpack, to be used as hand luggage everyday in the vehicle and as day-pack for the hikes and climbs. Usually, a 30-35 liters one would be enough, but for the Ojos del Salado Expedition there is a portage to do from Atacama Base Camp to Tejos High Camp. As part of the acclimatizing program, we do this hike twice, bringing half of the loads on the first hike and half on the second hike.



On the second day hike, we stay at the high camp, so we need to bring our sleeping bag. Therefore, the sleeping bag needs to fit in your backpack. Otherwise, you will use it to transport your box-lunch, water, warm clothes in the day hikes / climbs. Also used for summit days.

**We recommend:**

- AirContact 40+10 from Deuter
  - Gravity Expedition 40+8 from Deuter
  - Archeon 45 from Osprey
  - AirZone Pro 35-45 from Lowe Alpine
  - Apex guide 45 from Salewa
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### **The Headlamp**

An essential item in your backpack and your tent, choose a modern high-performance headlamp among the wide range of options available in the market. This small lamp will be used in your tent every evening/night and will have a crucial role on summit day when we need to start getting ready for the climb in the middle of the night. Furthermore, you will use it for a few hours at night/dawn of summit day.

A recommended habit for mountaineers and trekkers is always bringing it in the backpack, even for day hikes and climbs. Get one that is light, easy to use, with universal battery options, and moreover, with a minimum light output of 350 to 400 lumen.

**We recommend:**

- ACTIK® CORE from Petzl
- STORM 400 HEADLAMP from Black Diamond
- BIOLITE HEADLAMP 750 from Biolite

[See more about headlamps](#)

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### **The Water Bottles**

Mountaineers and trekkers may be split into two categories: people who prefer to hydrate with hot drinks and those who would drink cold even when in freezing environments. If you belong to the second category, our advice would be to have both water bottles and thermos.



The decision on how many bottles and thermos is all yours. Our advice is not less than 2 liters and no more than 3. The water bottles need to be light, have a very secure screw cap, simple to use. Made in safe material that doesn't hold onto flavors.

**We recommend:**

- Nalgene Wide-Mouth
  - Nalgene Narrow Mouth Bottle
  - GSI Outdoor Microlite 720 Twist
  - Klean Kanteen Insulated Classic
  - Nalgene Insulated Bottle Carrier
  - Traveler Aluminium Bottle from Salewa
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### **The Vacuum Flask or Thermos**

An essential item for summit days in the Andes. Consider that in extreme conditions, a hot drink could make the difference in helping your body to cope with the cold and even hypothermia. For those who choose to bring 2 liters of cold water, we would recommend complementing with a 0,5 or 0,75 L of a hot drink.

The main features of a good thermos for a mountaineering expedition are its weight and its capacity to keep water hotter than 37C/98.6F (human core body temperature) for an extended period of time (24hrs+). Additionally, they should have a very secure and simple screw top. It needs to be really easy to open and close.

**We recommend:**

- Primus Vacuum Bottle Black - 1L
  - Primus TrailBreak Vacuum Bottle Black - 1.0L
  - Primus Vacuum bottle Melon Pink - 0.5L
  - Salewa Thermo Lite 750ml
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### **The Crampons (12 points)**

Our Ojos del Salado Expedition includes the ascent of one summit of 5000m/16400ft and two summits of more than 5000m/19700ft. Most of the time, you will walk in volcanic/no snowy terrain. On the other hand, the expedition takes place during the so called "Bolivian winter," a frame of time coincident with the South American summer when we expect some snow to fall in the area.



Furthermore, on Ojos del Salado summit day, it is not unusual to find significant snow accumulations from the past winter. You will need to bring a pair of flexible steel crampons, better automatic or semiautomatic, with anti-snow plates. And make sure the crampons fit with your summit day boots.

**We recommend:**

- G2 from Grivel
  - G12 from Grivel
  - Vasak Leverlock Universel from Petzl
  - Camp ascent universal
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**The Light Harness**

To be used only on Ojos del Salado summit day. In the last part of the ascent, you will arrive at the crater, at almost 6800 meters over sea level (22.300ft). You will cross the crater towards the east and reach the base of a volcanic rock cliff. At this point, you will need your harness to climb it. The guides will have the rope and all required technical equipment.

You will only need the harness to climb these 80 meters of rock (260ft). The climb is scrambling on II and III grade terrain, and the guide will belay you for **these** last few meters of the ascent. This harness needs to be as light as possible, simple, and easy to use. It must fit over your mountaineering clothes and be fully adjustable, waist, and legs.

**We recommend:**

- VARIO SPEED HARNESS from black diamond
- Alpine Bod Seat Harness from Black Diamond
- Alpine Seat Harness from Black Diamond

[See more about alpine harnesses](#)

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**Telescopic Trekking Poles**

This is an essential item. Due to the kind of terrain in the Ojos del Salado Expedition, using a good pair of trekking poles is more useful than an ice ax. The volcanic slopes of the altiplano will put your balance as well as your knees and ankles to the test. You will discover that they not only provide comfort but also safety to ascents and walks.





Choose a pair that fit your size, reliable and robust, built-in carbon fiber. These poles consist of two or three sections that nest into each other with a locking mechanism to hold them in place when extended. They're highly adjustable and can pack down small. Avoid the "folding type" that is less resistant and not suitable for the Ojos del Salado expedition.

**We recommend:**

- Distance Carbon FLZ from Black Diamond
- TRAIL PRO TREKKING POLES from Black Diamond
- TRAIL ERGO CORK TREKKING POLES from Black Diamond
- Sherpa Lite XTG from Leki
- Sherpa XTG Antishock from Leki
- Carbon TA XTG from Leki

[See more about trekking poles](#)

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### **The Helmet**

To be used only on Ojos del Salado summit day. In the last part of the ascent, you will arrive at the crater, at almost 6800 meters over sea level (22.300ft). You will cross the crater towards the east and reach the base of a volcanic rock cliff. At this point, you will need your helmet to climb it. The guides will have the rope and all required technical equipment.

The climb is scrambling on II and III grade terrain, and the guide will belay you for these last few meters of the ascent. This helmet needs to be as light as possible, simple, and easy to use. It must fit over your hat and be fully adjustable to your head.

**We recommend:**

- SIROCCO from Petzl
- METEOR from Petzl
- VAPOR from Black Diamond
- STEALTH or STEALTH RECCO from Grivel

[See more about climbing helmets](#)

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Check also our ***Clothing List for Ojos del Salado Expedition***

**Written by Vivianne Cuq January 8 2021**