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| **Personal Details** | | |
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| **Name** | Peter David Knight |
| **Nationality** | Canadian; UK and New Zealand |
| **Residency** | New Zealand |
| **Passport No.** | LN746770 (New Zealand) |
| **Offshore Certificates** | UKOOA Medical obtained 10/8/2016 valid until 10/8/2018  OPTIO BOSIET and FOET attained 11/8/16 expires 10/8/2020 |

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| **Professional Summary** |
| Professional Hydrographic Surveyor (Level 1 AHSCP)—Member New Zealand Institute of Surveyors |

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| **Education—Courses—Conferences** | |
| **2017**  **2016**  **2014**  **2012**  **2010**  **2008**  **2008**  **2006**  **2005**  **2004**  **2004**  **2003**  **1998**  **1997**  **1994**  **1990**  **1987**  **1980** | New Zealand Institute of Surveyors Conference, 21-24 June, Napier, New Zealand  Water Boundaries Seminar, New Zealand Institute of Surveyors, Dunedin.  New Zealand Institute of Surveyors Conference, New Plymouth, New Zealand Oct 30th-Nov 1st.  Canadian Hydrographic Conference, Niagara Falls, Canada  Geohab Conference, Wellington, New Zealand  CARIS Training, University of Otago, HIPS CUBE Processing, five-day programme. August 2008.  PhD University of Otago, School of Surveying.  Certified ‘Level 1’ Hydrographic Surveyor, Australasian Hydrographic Surveyors Certification Panel.  Shallow Water Conference, Plymouth, UK  Ocean Mapping Group, 5 Day Course in Multibeam Sonar, Burlington, ON, Canada. May 2004.  Canadian Hydrographic Conference, Toronto, Canada  Australasian Hydrographic Conference, Christchurch, New Zealand.  CARIS Training HIPS seven-day programme, Fredricton, NB, Canada.  Ocean Mapping Group, 5-Day Course in Multibeam Sonar, Freemantle, WA.  Master of Applied Science, Dept. Civil Engineering, University of Toronto, Canada.  Bachelor of Science (Surveying), University of Toronto, Toronto, Canada.  Bachelor of Arts, University of Guelph, Guelph, ON, Canada  Humber College, Toronto, ON, Canada. Technologist Diploma in Hydrographic Surveying, |

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| **Professional History** |

**2017 Geomatics N.Z. Ltd**

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| **August 18th—August 28th** | Client: Otago Regional Council |
|  | Project: Lower Waitaki Flood Debris Survey |
|  | Area: New Zealand, South Island |
|  | Vessel: Shore based |
|  | Description: Project leader; Surveyor, RTKGNSS, reporting,  costing management and supervision |

**2017 Oceanscan**

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| **July 5th—August 10th** | Client: Allseas |
|  | Project: Sur de Texas-Tuxpan 42” gas pipeline |
|  | Area: Gulf of Mexico |
|  | Vessel: Tog Mor |
|  | Description: Senior Surveyor, EIVA. Veripos; Septentrio;  Hemisphere; Eiva Tug Management TMS; Bullet Wifi LAN. |

**2017 GeomaticsNZ**

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|  | Client: Satellite Survey Equipment Sales and Hire |
|  | Project: Support and Training |
|  | Area: Dunedin, New Zealand |
|  | Vessel: Not applicable |
|  | Description: Testing of GNSS survey equipment, sales and training. |

**2016 GeomaticsNZ**

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|  | Client: Bankside Chambers, Auckland, New Zealan |
|  | Project: Edminstin vs Sanford Ltd |
|  | Area: New Zealand |
|  | Vessel: N/A |
|  | Description: Expert witness in High Court hearing involving fishing  locations, historical management systems of Bluff Oyster Fishery |

**2016 GeomaticsNZ**

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| **April 2016** | Client: IIC Technologies |
|  | Project: IHO S-8 Training |
|  | Area: Busan, Korea |
|  | Vessel: KOHA Survey vessel |
|  | Description: Training of nautical cartographer is hydrographic  Surveying techniques. |

**2015 GeomaticsNZ**

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| **March-April 2015** | Client: Aecom-URS New Zealand Ltd |
|  | Project: Survey of Hurunui and Waiau Rivers |
|  | Area: New Zealand South Island |
|  | Vessel: Jet Boat |
|  | Description: Surveyor-in-charge, Principal Consultant  River cross-sections, support for aerial imagery team. HydroPro;  CHC X91 RTK GNSS; Carlson SurveCE; Trimble Business Centre;  Adobe Illustrator; Word; Excel. |

**2015 GeomaticsNZ**

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| **January 2015-April 2015** | Client: Paterson Pitts Group |
|  | Project: Hydrographic capability building |
|  | Area: New Zealand South Island |
|  | Vessel: Not applicable |
|  | Description: Surveyor-in-charge, Principal Consultant  Development of hydrographic capability for Port Otago.  Presentations and networking; commuication with suppliers of  multibeam, sub-bottom profiler, GNSS etc.; formulation of proposal.  : |

**2015 GeomaticsNZ**

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| **January 2015-March 2015** | Client: OPUS International Consultants |
|  | Project: Kawarau Falls Bridge survey and inspection |
|  | Area: New Zealand South Island |
|  | Vessel: Jet boats various |
|  | Description: Surveyor-in-charge, Principal Consultant  Development of hydrographic acquisition and visual inspection system.  HydroPro; Trimble Business Centre; CHC X91 RTKGNSS; Sonarmite; GoPro  Underwater camera with WiFi accessories; AeroHawk 3-D. |

**2014—2015 Ocean Scan**

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| **December 2014-January 2015** | Client: Allseas |
|  | Project: Wheatstone‑24 in. Flowline installation |
|  | Area: North West Self, Western Australia |
|  | Vessel: Audacia |
|  | Description: Online Surveyor—Operation of survey systems,  pipelay operations —ROV support  Eiva Navipac; Sonardyne Ranger GUSBL; Veripos LD7, Apex, Ultra;  Octans motion and heading. Valeport, SVX.  . |

**2014 IPS**

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| **October 2014-December 2014** | Client: CADS Survey—Saipem Leighton—Gorgon Project |
|  | Project: Hydrograhpic Survey of LNG Jetty and Approaches |
|  | Area: Barrow Island, Western Australia |
|  | Vessel: CTV 9 |
|  | Description: Surveyor in Charge responsible for:  Field survey and reporting.  Equipment: R2 Sonic multibeam; HyPack Survey; HyPack Editor  Teledyne Odom ‘Digibar S’; Hemisphere VS11; Trimble SPS855 |

**2014 Ocean Scan**

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| **June 2014-September 2014** | Client: Allseas |
|  | Project: Wheatstone Project 44 in Trunkline installation |
|  | Area: Nr. Barrow Island, Western Australia |
|  | Vessel: Tog Mor |
|  | Description: Online surveyor during pipelay operations.  Equipment: Eiva Navipac; Eiva TMS; Veripos |
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**2014 GeomaticsNZ**

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| **January 2014-February 2014** | Client: OPUS |
|  | Project: Kawarau River; Victoria Bridge Abutment |
|  | Area: Central Otago, New Zealand |
|  | Vessel: Puni Nui |
|  | Description: Surveyor in Charge responsible for system development;  Field survey; reporting and all contract administration. |

**2013 RPS**

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| **September 3-Oct 2nd 2013** | Client: Harkand Andrews |
|  | Project: Borkum II West Wind Farm, Cable installation |
|  | Area: Noth Sea, German Bight |
|  | Vessel: Normand Pioneer |
|  | Description: Online surveyor: Pre-lay survey (cameras and obstacle  avoidance sonar); cable installation and trenching  Eiva Navipac; Visual Works—DVR; C-Nav GNSS |

**2013 IV Offshore**

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| **August 15-August 27th 2013** | Client: Subsea Specialist Services |
|  | Project: Borwin Alpha-Beta: Cable survey  and visual survey of jacket. |
|  | Area: Noth Sea, German Bight |
|  | Vessel: Ernest Shackleton |
|  | Description: Online surveyor: EIVA Navipac; VisualWorks-DVR  Reson 8125 dual head multibeam; HiPap; Edgetech side scan;  Tritech SCU3 Bathy; Veriopos GNSS.**.** |

**2013 RPS**

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| **July 31-August 15th 2013** | Client: DOF |
|  | Project: Banff Reinstatement Project |
|  | Area: Noth Sea, UK |
|  | Vessel: Skandi Bergen |
|  | Description: Online surveyor: Electrical Umbilical lay; mattress  Installation; EIVA Navipac; Minisoft CTD; Fugro Multifix; HiPap. |

**2013 ATLAS Services**

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| **July 3-17th 2013** | Client: DeepOcean |
|  | Project: Asgard Infield, pipeline inspection |
|  | Area: Noth Sea, Norway |
|  | Vessel: Volstad Surveyor |
|  | Description: Online surveyor: Full suite, Reson MB; Edgetech SSS;  EIVA Navipac; Naviscan; Hipap; TSS Pipetracker; CTD; Fugro Multifix; HAIN;  Digiquartz. |

**2013 Geomatics NZ Ltd**

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| **April-May 2013** | Client: URS New Zealand Ltd |
|  | Project: Rakaia River: Topographic and hydrographic survey |
|  | Area: New Zealand, South Island |
|  | Vessel: Jet |
|  | Description: Hyrographic surveyor; logistics; reporting; field survey;  Data processing; client communications.  Software: HydroPro; Trimble Geomatics Office;  Carlson SurvCE |

**2013 Geomatics NZ Ltd**

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| **March 2013** | Client: URS New Zealand Ltd |
|  | Project: Kurow Bridges; Pre-construction topo/hydrographic survey |
|  | Area: New Zealand, South Island |
|  | Vessel: Jet |
|  | Description: Hydrographic surveyor: logistics; reporting; field survey;  data processing; client commnications.  Software: HydroPro; Trimble Geomatics Office;  Carlson SurvCE |

**2012 DOF Subsea**

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| **Oct-Dec 2012** | Client: Neptune Minerals |
|  | Project: Tinakula—Geological and Environmental Survey |
|  | Area: Solomon Sea |
|  | Vessel: Skandi Hawk |
|  | Description: Online Surveyor—Positioning; reporting—NaviPac;  Konsberg Hi-pap; Starfix; Multifix; Valeport CTD.  **.** |

**2011 BTW SOUTH (Cromwell, New Zealand)**

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| **Oct-Dec 2011** | Client: Solid Energy |
|  | Project: Mataura Briquetting Plant |
|  | Area: South Island, New Zealand |
|  | Description: Site Engineer. Grading; control survey; layout of piles  Software: Carlson SurvCE; 12D; MS Office |

**2010—2011 PATERSON PITTS GROUP (Dunedin, New Zealand)**

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| **May—Sept 2011** | Client: GHD Engineering |
|  | Project: Christchurch Sewer Survey |
|  | Area: Offshore Christchurch, New Zealand |
|  | Description: Level survey. Post-earthquake redesign of city network. |

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| **March—April 2011** | Client: Christchurch City Council |
|  | Project: Hydrographic Survey Lower Avon River and Estuary |
|  | Area: Offshore Christchurch, New Zealand |
|  | Description: Post-earthquake hydrology determination. |

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| **Dec 2010—March 2011** | Client: Christchurch City Council |
|  | Project: Birdlings Flat ocean beach hydrographic survey |
|  | Area: Offshore Christchurch, New Zealand |
|  | Description: Survey in support of building an engineering model. |

**1997—2010 UNIVERSITY OF OTAGO (Dunedin, New Zealand)**

**Lecturer in Hydrography**

—Implementation of Category A Programme in Hydrographic Surveying

—Development of hydrographic field surveying systems (acquisition of Benthos C3D)

—Charting of small boat harbours in Otago Harbour

—Research into Legal Administration of Offshore Petroleum Interests

—Research into Common Pool Resource Systems

—Support of many graduate projects in surveying science

**2004—Present GEOMATICS N.Z. LTD (Consultancy)**

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| **March 2011—Present** | Project: CHC GNSS equipment |
|  | Area: South Island, New Zealand |
|  | Description: Support |

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| **Jan—Feb 2009** | Client: DLA Phillips Fox |
|  | Project: Nelson City Council v Diamond Offshore Netherlands BV |
|  | Area: South Island, New Zealand  Description Expert witness in legal proceedings: issue concerned  location of drilling rig at time of anti-fouling incident |

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| **July 2008—August 2008** | Client: Mconnell Dowell Constructors |
|  | Project: Dunedin (Tahuna) Ocean Sewer Outfall |
|  | Area: Dunedin, New Zealand |
|  | Vessel: POLARIS II |
|  | Description: As-built survey of offshore pipeline. Sonar imagery and  precise bathymetry. |

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| **Feb 2008—March 2008** | Client: Mconnell Dowell Constructors |
|  | Project: Dunedin (Tahuna) Ocean Sewer Outfall |
|  | Area: Dunedin, New Zealand |
|  | Description: Design, implementation, measurement and analysis of Dunedin ocean ocean beach tidal regime. |

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| **June 2006—July 2006** | Client: Mconnell Dowell Constructors |
|  | Project: Dunedin (Tahuna) ocean sewer outfall |
|  | Area: Dunedin, New Zealand |
|  | Vessel: POLARIS II |
|  | Description: Site Survey. Sub-bottom profiling; sidescan; bathymetry. |

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| **Sept 2005—Dec 2005** | Client: NZ Department of Conservation |
|  | Project: Nugget Point Survey |
|  | Area: Christchurch, New Zealand |
|  | Vessel: MUNIDA |
|  | Description: Coastal hydrographic survey. Bathymetry & side scan sonar survey in |

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| **June 2004—Dec 2004** | Client: Chapman Tripp |
|  | Project: Govt of New Zealand v. Perseverence |
|  | Area: North Island (Napier), New Zealand |
|  | Description: GIS data analysis/charting consultancy services |

**1997—2003 SEA IMAGE HYDDROGRAPHICS (Consultancy)**

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| **Dec 2003** | Client: Duffil Watts and King Engineers |
|  | Project: Milford Sound hydrographic survey |
|  | Area: West Coast, New Zealand |
|  | Description: Post-dredge hydrographic survey. |
| **Jan 2003** | Client: Duffill Watts and King Engineers |
|  | Project: Milford Sound hydrographic survey |
|  | Area: West Coast, New Zealand |
|  | Description: Pre-dredge hydrographic survey. |
| **May 1998** | Client: Dunedin City Council |
|  | Project: Waldronville Outfall Survey |
|  | Area: South Island, New Zealand |
|  | Vessel: MUNIDA |
|  | Description: Site Survey: Sidescan sonar, bathymetry. |

**PREVIOUS EXPERIENCE**

**1991-1997 Canadian Hydrographic Service Central and Arctic Region—Multidisciplinary Hydrographer**

Duties included hydrographer aboard survey launches on many deployments both ship and shore based. Operation of hydrographic acquisition software, instrument calibration; operation of postioning systems; and depth sounders. Control surveys, survey calculations; plotting of survey data. Duties also included compilation and production of nautical charts.

**1990 Government of Canada Department of Public Works—Survey Assistant**

Duties included assisting in hydrographic surveys on a sweep vessel (Detroit River); and various small boat and land surveying activities. Duties included operation of surveying instruments and survey calculations.

**1985—1989 Van Harten Surveys (Guelph, ON Canada)—Instrument Man; Party Chief (leveling).**

Duties included operation of terrestrial surveying equipment, record keeping; survey calculations. Boundary surveys; lay out and as-built surveys; leveling; drainage certificates.

**1985—Palmer Marine Surveys (Yarmouth, UK)**

Duties: Site survey, North Sea. Track control (line running); reduction and plotting of survey results.

**1980—1982**

Public Works Canada, Fraser River Survey—Survey technologist

Swann and Wooster Engineering—Survey technologist

North West Hydrographic Surveying—Survey technologist—included cable lay survey, Georgia Strait, BC, Canada.

**1979**

Marinav Corp. Ottawa On. Canada—Survey Assistant. Putting up ARGO towers in Davis Strait, and DECCA towers in the Queen Elizabeth Islands.

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| **SOFTWARE & EQUIPMENT COMPETANCY** |

**Software**

Processing: Caris Editor; Caris Base Editor; HIPS; SIPS; Hypack

Hydrographic Acquisition and Positioning: Eiva NaviPac; Naviscn; APOS-HiPap; Triton ISIS; HydroPro; Hypack; Starfish (sidescan software)

Office: MS Office; Adobe Illustrator; Map Publisher

Operating Systems: Unix; Linux; Windows XP-7-Vista; Mac OSX; Windows Mobile 6

GNSS operation and processing: Trimble Geomatics Office (TGO); Fugro Starpack; Fugro Multifix

**Equipment**

**Multibeam/Bathymetric Sonar/Bathy**

Benthos C3D; Simrad EM3000; Reson 7145; Digiquartz; Tritech Bathy.

**Side Scan Sonar**

Klein 595; Starfish; Edgetech.

**Single Beam Echo Sounder**

Ross 801; Raytheon; Ross 825; Odom MKII; SonarMite

**Sound Velocity Profiler**

Valeport CTD; Odom digibar; Marimatech

**Acoustic Positioning**

Kongsberg HiPap 500 (APOS Controller Unit); Sonardyne Ranger 1 and Ranger 2.

**Intertial Nav**

HAIN

**Gyro**

Anschutz Standard 22 Heading Sensor; Honeywell; Seapath

**Motion Sensing**

Octans; Seapath; Sonardyne Radian UM-8041-000 Attitude and Heading Reference System (AHRS)

**GNSS**

RTK—Trimble R8; SPS855; CHC X91; DGPS Fugro Starfix HP; Clock Ephermeris—Fugro Starfix XP; Fugro Multifix.