



decisions with confidence

Independent Technical Specialist's Report on the assets of XCD Energy

For BDO Corporate Finance (WA) Pty Ltd

Date: 19 May 2020



1. Executive Summary

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19 May 2020

Dear Directors and Independent Expert,

Independent Technical Specialist’s Report on the assets of XCD Energy

XCD Energy ("XCD") have a 100% working interest in 17 exploration leases totalling 195,373 acres in the North Slope Basin of Alaska. XCD refer to the asset as **Project Peregrine**.

XCD has appointed BDO Corporate Finance (WA) Pty Ltd ("BDO") to provide an Independent Expert’s Report (IER) on their assets.

BDO has appointed RISC Advisory Pty Ltd ("RISC") to provide an Independent Technical Specialist’s Report (ITSR) in support of the IER, which includes an assessment of the market value of Project Peregrine. In particular, our report provides an independent opinion on the value that Project Peregrine would change hands for as at the date of the report in an open and unrestricted market between a willing buyer and a willing seller in an ‘arm’s length’ transaction, with each party acting knowledgeably, prudently and without compulsion.

Fair market value of Project Peregrine

RISC estimates a fair market value range for Project Peregrine of between US\$ 3 million and US\$ 14.8 million with a best estimate of **US\$ 9.6 million**, (Table 1-1).

Table 1-1: Valuation of Project Peregrine (US\$ million)

Asset	Valuation Range (US\$ million)		
	Low	Best	High
Project Peregrine	3.0	9.6	14.8
Valuation rationale	Farm-in on a 1.2:1 promote	Farm-in on a 1.4:1 promote	Farm-in on a 1.6:1 promote

RISC valued Project Peregrine with two methods both using comparable transaction analysis. We consider farm-in promotion factors from comparable transactions to be the most appropriate method to value the project.

This report provides a description of Project Peregrine and the rationale for our valuation.

Project Peregrine

Project Peregrine is a land position held at relatively low-cost on trend with significant recent discoveries in the same stratigraphy and analogous stratigraphic trapping mechanisms in the North Slope Basin, Alaska. Interest in the Brookian play of the North Slope Basin has increased significantly over the last several years following discoveries at Horseshoe and Pikka (in acreage now operated by Oil Search), and discoveries at Willow and Harpoon (in acreage operated by ConocoPhillips). ConocoPhillips announced they had encountered hydrocarbons at their Harpoon well on 30 April 2020¹. The Harpoon well is considered to improve the geological chance of success of the Harrier prospect in Project Peregrine as it is interpreted to be on trend, (Figure 1-1).

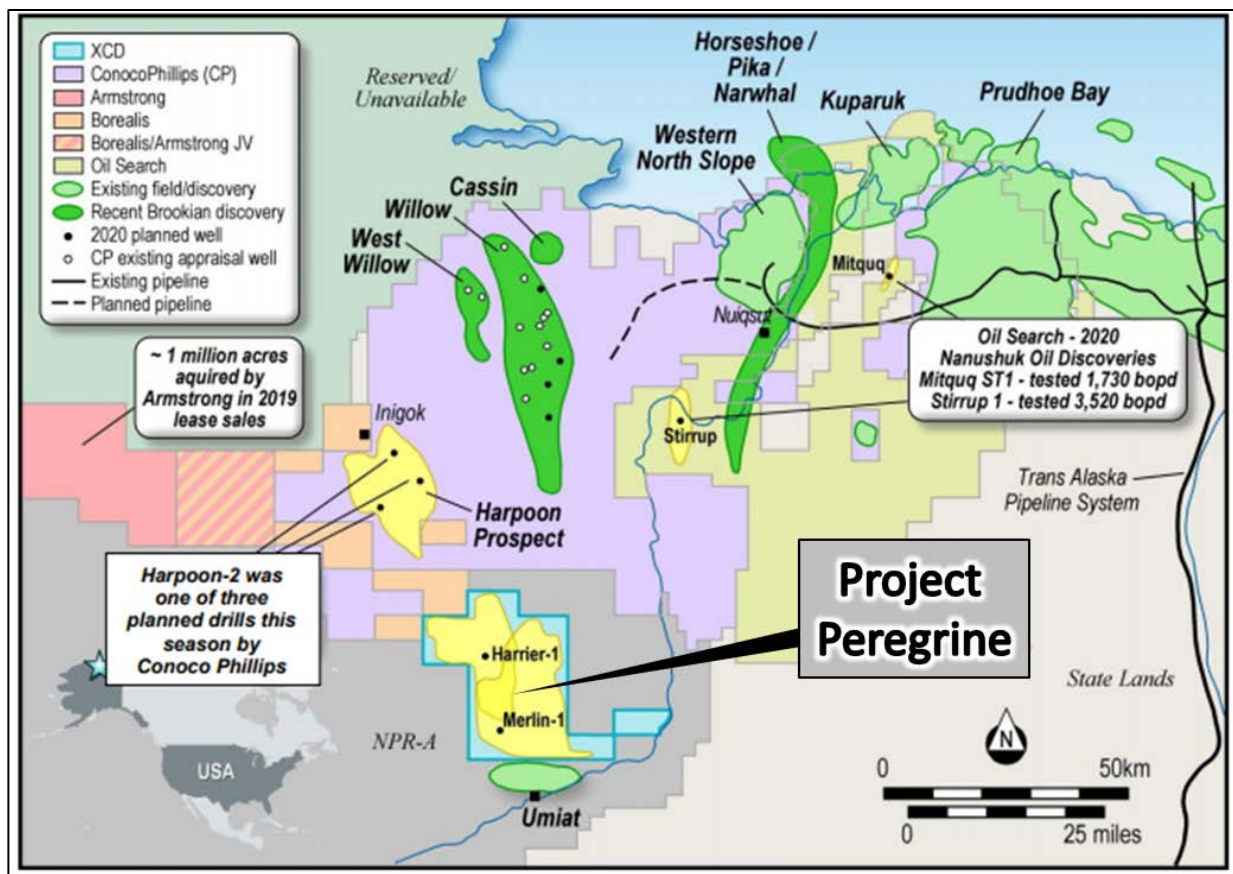


Figure 1-1: Location map of the XCD exploration leases (Project Peregrine)

Despite the recent sharp drop in oil prices, we consider that the Harpoon well on adjacent acreage has had a positive effect on the value of Project Peregrine in that the chances of XCD being able to farm-out their acreage on promoted terms would have increased following the encouraging report of indications of hydrocarbons being encountered by the Harpoon well.

¹ At the time of writing this report, ConocoPhillips had not released specific details on their Harpoon well

Table of contents

1.	Executive Summary	1
2.	Terms of reference and basis of assessment	5
2.1.1.	Terms of reference	5
2.1.2.	Basis of assessment	5
2.1.3.	Exploration evaluation.....	6
2.1.3.1.	Comparable transaction metrics	6
2.1.3.2.	Farm-in promotion factors	6
2.1.3.3.	Work program commitments	7
2.1.3.4.	Expected monetary value (EMV)	7
2.1.3.5.	Market factors	7
3.	Geological setting	9
3.1.	North Slope Basin	9
4.	Project Peregrine	14
4.1.	Lease details	14
4.2.	Data	15
4.3.	Resources estimate	16
4.4.	Risk (Geological chance of success).....	16
4.5.	Past costs	16
4.6.	Work programs and commitments	16
5.	Project Peregrine valuation	17
5.1.	Comparable transaction analysis.....	17
5.2.	Valuation using farm-in promotion factors	19
5.3.	Valuation using \$/acre.....	20
5.4.	Valuation summary	21
5.5.	Valuation assumptions	21
6.	Declarations.....	22
6.1.	Qualifications.....	22
6.2.	ASIC Regulatory Guides and VALMIN	22
6.3.	Petroleum Resources Management System	22
6.4.	Report to be presented in its entirety	23
6.5.	Independence.....	23
6.6.	Limitations	23
6.7.	Consent.....	24
7.	List of terms	25
7.1.	Abbreviations.....	25
7.2.	Definitions	28

List of figures

Figure 1-1: Location map of the XCD exploration leases (Project Peregrine)	2
Figure 2-1: WTI oil price versus XCD share price 2015-2020	8
Figure 3-1: Project Peregrine location and structural setting	9
Figure 3-2: Cross section through the North Slope Basin ²	10
Figure 3-3: Stratigraphy of the North Slope Basin.....	11
Figure 3-4: Clinoform trends of the Nanushuk play and the respective location of fields and the XCD prospects	12
Figure 3-5: Depositional model of the Nanushuk play and seismic examples from the Willow discovery and Merlin prospect	12
Figure 3-6: XCD acreage in relation to current North Slope Basin operators and activity.....	13
Figure 4-1: Satellite imagery over the XCD leases (Project Peregrine)	14
Figure 4-2: Project Peregrine seismic and well database.....	15

List of tables

Table 1-1: Valuation of Project Peregrine (US\$ million).....	1
Table 4-1: XCD exploration lease areas	14
Table 4-2: ERCE (2020) estimate of prospective resources in Project Peregrine.....	16
Table 5-1: Valuation of Project Peregrine (US\$ millions)	17
Table 5-2: Comparable transactions in the period January 2015 – May 2020 (GlobalData)	18
Table 5-3: Range of market-adjusted farm-in promotion factors used in our valuation.....	19
Table 5-4: Valuation from farm-in promotion factors	20
Table 5-5: Comparable transactions (\$/acre) in the period January 2015 – May 2020.....	20
Table 5-6: Range of market adjusted US\$ / acre estimates used in our valuation	21
Table 5-7: Valuation from \$ / acre calculation	21

2. Terms of reference and basis of assessment

2.1.1. Terms of reference

This assignment has been conducted under the terms of our engagement with BDO dated 30 April 2020. BDO has requested a report on the current market value of Project Peregrine.

BDO asked for the following to be provided in our report:

- A competent person statement for the author and all contributors that demonstrates our claims against the requirements of a Specialist and the competency to conduct the work we have been engaged to do;
- The sources of any material information or data used and whether Consent has been required;
- Our fee and whether it is dependent on our conclusions, success or failure of the Proposed Transaction, or time and cost restrictions that negatively affect the depth of analysis or extent of detail required to provide shareholders with the information they require to make an informed decision;
- The provision of any previous reports;
- If commercially sensitive information has been excluded;
- A tenure list appropriately prepared;
- Quality and reasonableness statements for any mineralisation, mineral resources, or ore reserves (Section 7.3), and [PRMS categories];
- An evaluation on risks.

Our report provides our expert opinion of the current market value of Project Peregrine as at the date of the ITSR, on the basis of an unrestricted market between a willing buyer and a willing seller in an 'arm's length' transaction, with each party acting knowledgeably, prudently and without compulsion.

The ITSR is prepared in accordance with the PRMS (2018) and the VALMIN (2015) codes. Our services have been carried out in compliance with ASIC Regulatory Guides 112 Independence of Experts, and RISC is independent of XCD and 88 Energy Limited and their subsidiaries and associates

2.1.2. Basis of assessment

The data and information used in the preparation of this report were provided by XCD and supplemented by public domain information. RISC has relied upon the information provided by XCD. Data provided by XCD included the following:

- Project Peregrine farmout presentation;
- January 2020 ERCE Prospective resource report;
- May 2020 ERCE Resource update letter;
- NAPE 2020 XCD farm-out presentation;
- Willow Field technical information;
- Published papers on the geology of the North Slope Basin;
- SEG-Y data for 12 reprocessed seismic lines together with a report on the analysis of AVO and other attributes;
- Geochemical modelling study;
- Reservoir study.

A site visit was not considered necessary and not undertaken as part of our valuation. RISC was provided enough information from XCD to reach our conclusions and allow an informed evaluation.

2.1.3. Exploration evaluation

A range of oil and gas industry accepted practices can be used to estimate the value of exploration assets and these are discussed below. RISC has collated relevant data and information for the alternative valuation methods as below.

We have used our experience, skill and judgment to select the most appropriate methodology or methodologies for our valuation. Where and when possible, we have used more than one valuation method to reduce the risk that our opinion is being distorted by the choice of methodology.

The VALMIN Code defines Value as the amount of money (or the cash equivalent of some other consideration) determined by the Expert in accordance with the provisions of the VALMIN Code for which the Mineral or Petroleum Asset or Security should change hands on the Valuation Date in an open and unrestricted market between a willing buyer and a willing seller in an “arm’s length” transaction, with each party acting knowledgeably, prudently and without compulsion.

2.1.3.1. Comparable transaction metrics

The value of exploration assets can be estimated using recent comparable transactions. Such transactions may provide relevant metrics such as value per unit of reserves, contingent or prospective resources, and price paid per unit area of the permit or % interest. The VALMIN Code advises value must also consider risk and premium or discount relating to market, strategic or other considerations. For exploration assets, comparable transaction analysis can identify appropriate farm-in promotion factors.

2.1.3.2. Farm-in promotion factors

An estimate of value can be based on an estimation of the share of future costs likely to be borne by a notional farmee under prevailing market conditions. A premium or promotion factor may be paid by the farmee. The promotion factor is defined as the ratio of the proportion of the activity being paid for and the amount of equity being earned.

The nominal permit value is defined as the amount spent by the farmee divided by the interest earned. This represents the perceived value of the permit (i.e. the amount of money a willing investor is willing to spend to progress the opportunity including the future work program). However, it is not the cash value which would exclude the future work program cost. The cash value excluding the future work program costs is referred to as the premium value.

The premium value for the permit is the difference between the nominal value and the cost of the activity. This represents a cash amount that would be paid by the farmee to take on the future work program. The premium value is equivalent to the farmee paying the farmor a cash amount in return for the acquisition of the interest in the permit and can be taken as an indication of market value.

The premium or promotion factor will be dependent upon the perceived prospectivity of the property, competition and general market conditions.

Farm-in transactions may have several stages. For example, a farmee may acquire an initial interest by committing to a future cost in the first stage of the transaction but has an option to acquire an additional interest or interests in return to committing to funding a further work program or programs.

Farm-in agreements can also include re-imbursement of past costs and bonus payments once certain milestones are achieved, for example declaration of commerciality, or achieving threshold reserves volumes. Depending on their conditionality, such future payments may contribute to value. However, they may need to be adjusted for the time value of money and probability of occurring.

2.1.3.3. Work program commitments

The costs of a future work program may also be used to estimate value. The work program valuation relies on the assumption that unless there is evidence to the contrary the permit is worth what a company will spend on it. This method is relevant for permits in the early stages of exploration and for expenditure which is firmly committed as part of a venture budget or as agreed with the government as a condition of holding the permit. This assumes that the work program and options could be farmed out for a 2:1 promote. There may also need to be an adjustment for risk and the time value of money.

2.1.3.4. Expected monetary value (EMV)

EMV is calculated as the success case NPV times the probability of success less the NPV of failure multiplied by the probability of failure. The EMV method provides a more representative estimate of value in areas with a statistically significant number of mature prospects within proven commercial hydrocarbon provinces where the chance of success and volumes can be assessed with a reasonable degree of predictability. EMVs may require discounting to estimate market value depending upon project maturity and uncertainty.

The EMV valuation can also be used as a relative measure for ranking exploration prospects within a portfolio to make drilling decisions, assessing commercial potential and to demonstrate the commercial attractiveness of a permit, which may influence a buyer or seller.

2.1.3.5. Market factors

Since the latter part of 2014, oil prices have substantially declined from over US\$ 100/bbl to under US\$ 30/bbl in January 2016. They recovered somewhat and were trading near to US\$ 60/bbl at the time beginning of 2020. Since then, oil prices have dropped to around US\$ 20/bbl at the time of writing this report (Figure 2-1).

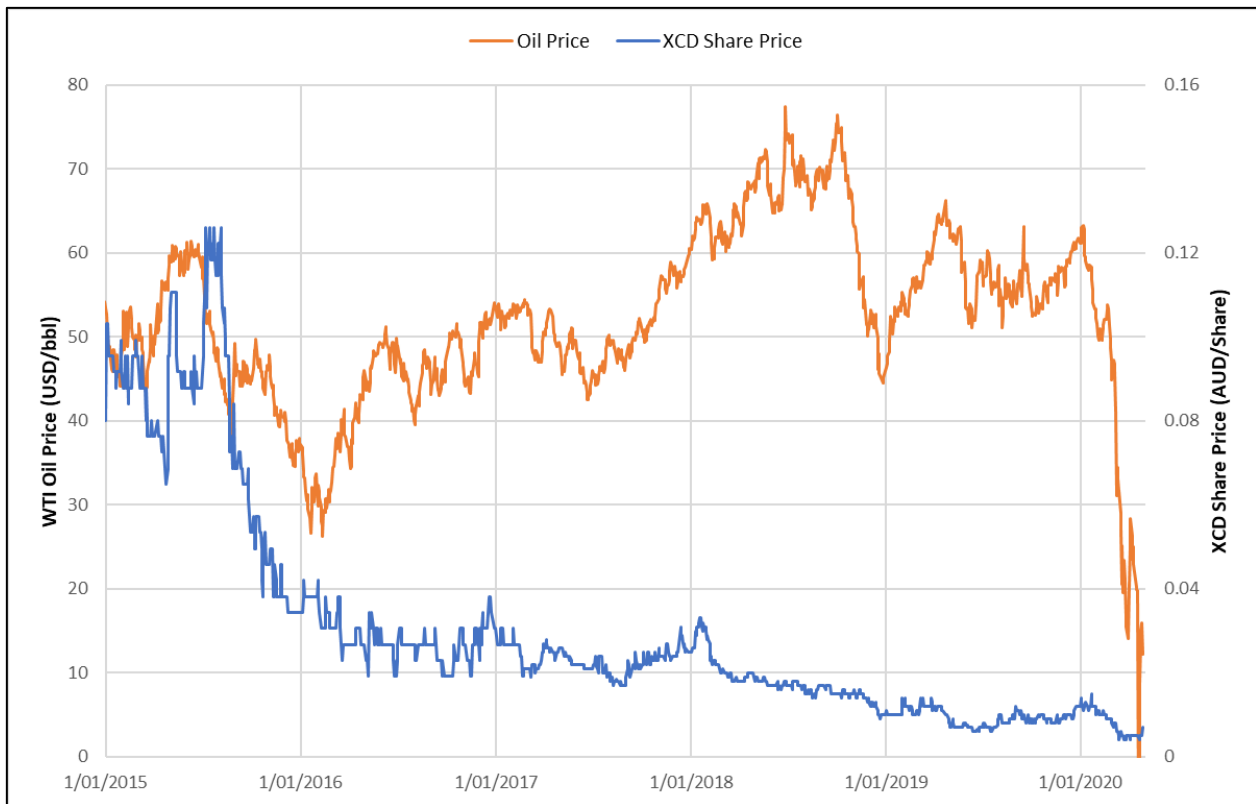


Figure 2-1: WTI oil price versus XCD share price 2015-2020

Prior to the mid-2014 oil price decline, interest in exploration opportunities was high and farm-in promotes of two or greater were being seen for quality acreage with large investment programs. Since then, there has been a paucity of transactions and anecdotally, RISC has identified that buyers are seeking farm-in promotes at or just above ground floor level.

In response to the market factors, our experience has been that oil and gas companies have slashed their exploration budgets and the value of exploration companies has declined significantly, although there were some signs that with the stabilisation and recovery in prices, exploration activity is beginning to improve, we suspect that interest in exploration assets will fall significantly again in response to the 2020 crash in oil prices.

3. Geological setting

3.1. North Slope Basin

The North Slope Basin is a petroleum province tectonically defined by a fold and thrust belt to the south and a passive margin to the north. A structural axis known as the Barrow arch separates the Colville foreland basin from the Alaska passive margin. Most of the oil and gas accumulations in the North Slope Basin are within the Colville foreland basin. Project Peregrine is in the Colville foreland basin directly to the north of the northern limit of the fold and thrust belt, Figure 3-1.



Figure 3-1: Project Peregrine location and structural setting

A representative line of section through the North Slope Basin indicating the tectonic setting of Project Peregrine is provided on Figure 3-2.

² Modified from Bird & Houseknecht, Geology and petroleum potential of the Arctic Alaska petroleum province

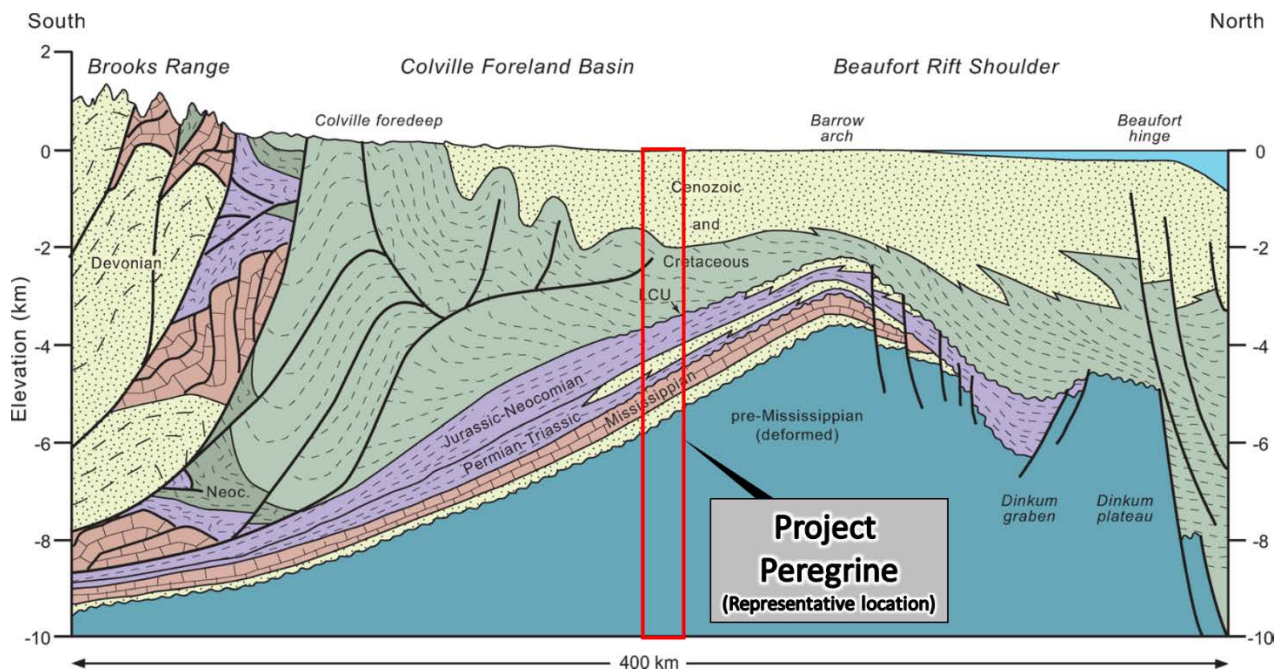


Figure 3-2: Cross section through the North Slope Basin²

The stratigraphy of the North Slope Basin is presented in Figure 3-3.

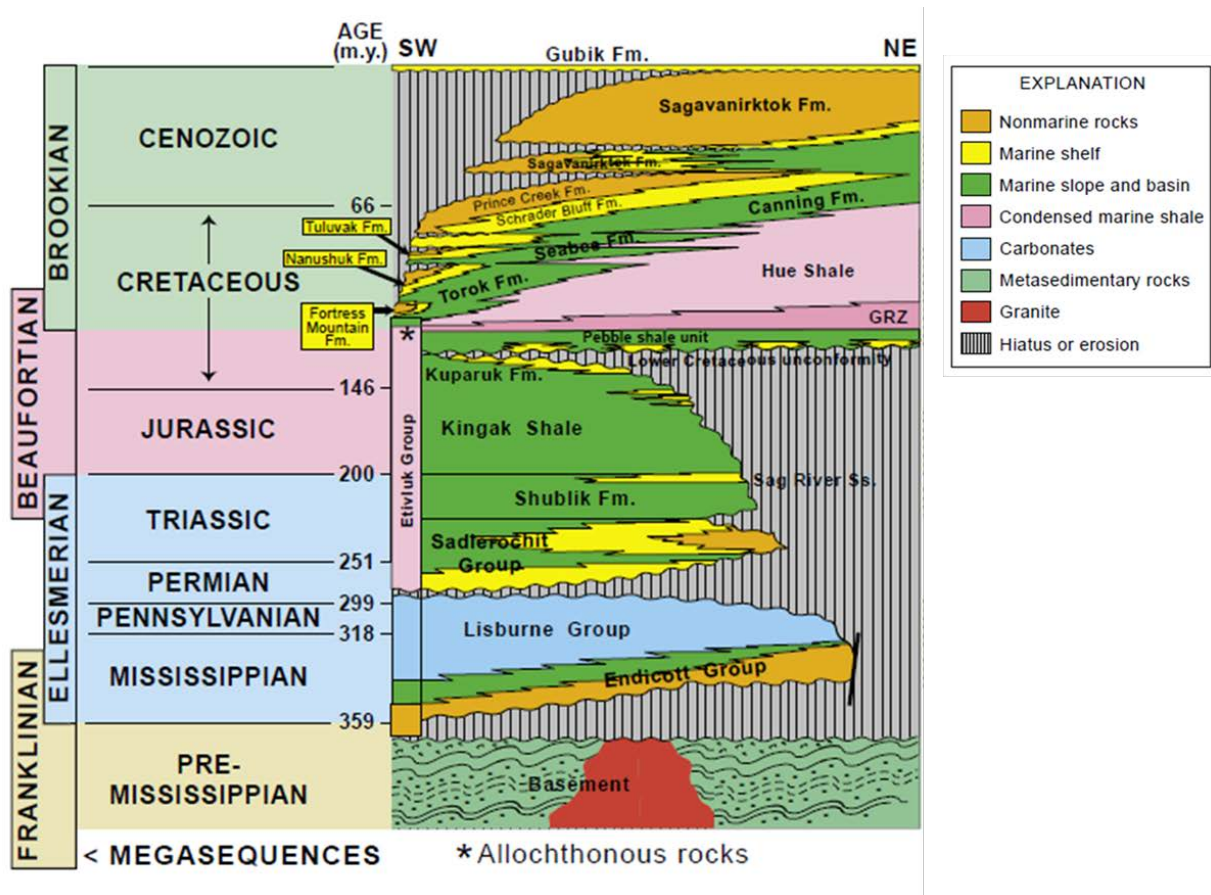


Figure 3-3: Stratigraphy of the North Slope Basin³

Project Peregrine targets the Cretaceous aged Brookian play, namely the Nanushuk Formation, and the deeper Torok Formation. The project sits on-trend with hydrocarbon discoveries in top-sets of the Nanushuk clinoforms, (Figure 3-4).

³ Modified by XCD, Originally from Bird & Houseknecht, Geology and petroleum potential of the Arctic Alaska petroleum province

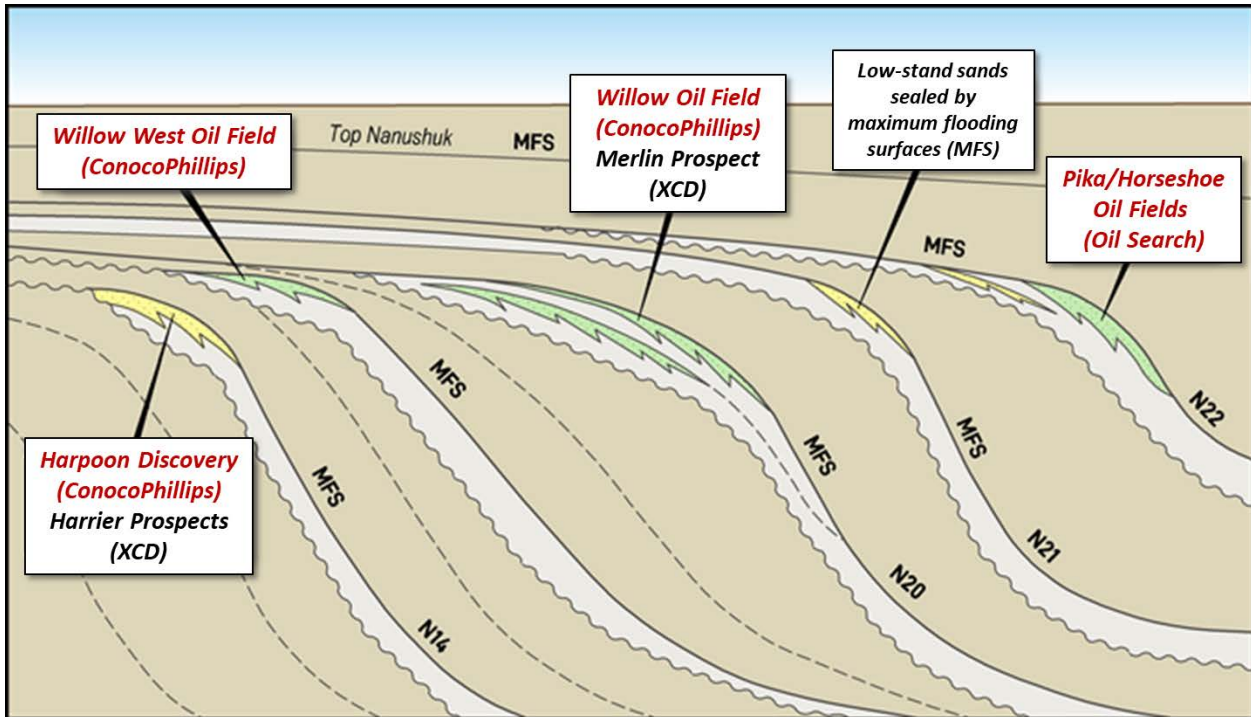


Figure 3-4: Clinoform trends of the Nanushuk play and the respective location of fields and the XCD prospects
 Seismic examples through the Willow discovery and XCD’s Merlin prospect are provided in Figure 3-5.

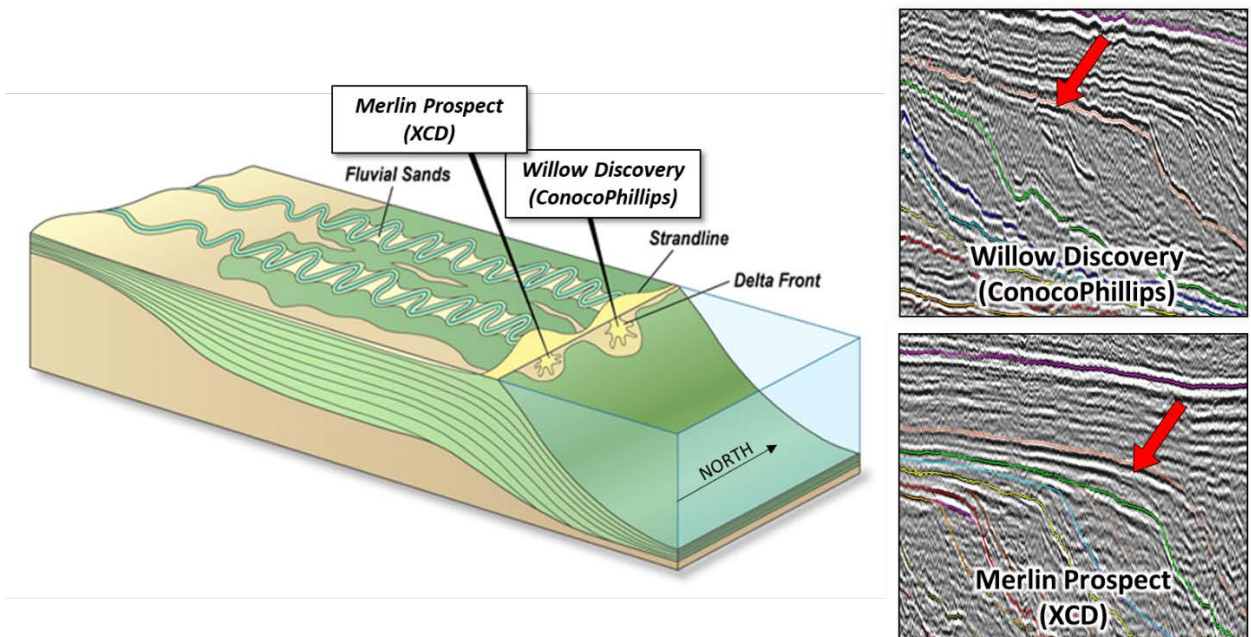


Figure 3-5: Depositional model of the Nanushuk play and seismic examples from the Willow discovery and Merlin prospect
 The proximity of the nearby analogous fields to Project Peregrine is shown on Figure 3-6. The Merlin prospect sits on trend with the Willow discovery. The Harrier prospect sits on trend with the recent Harpoon discovery.

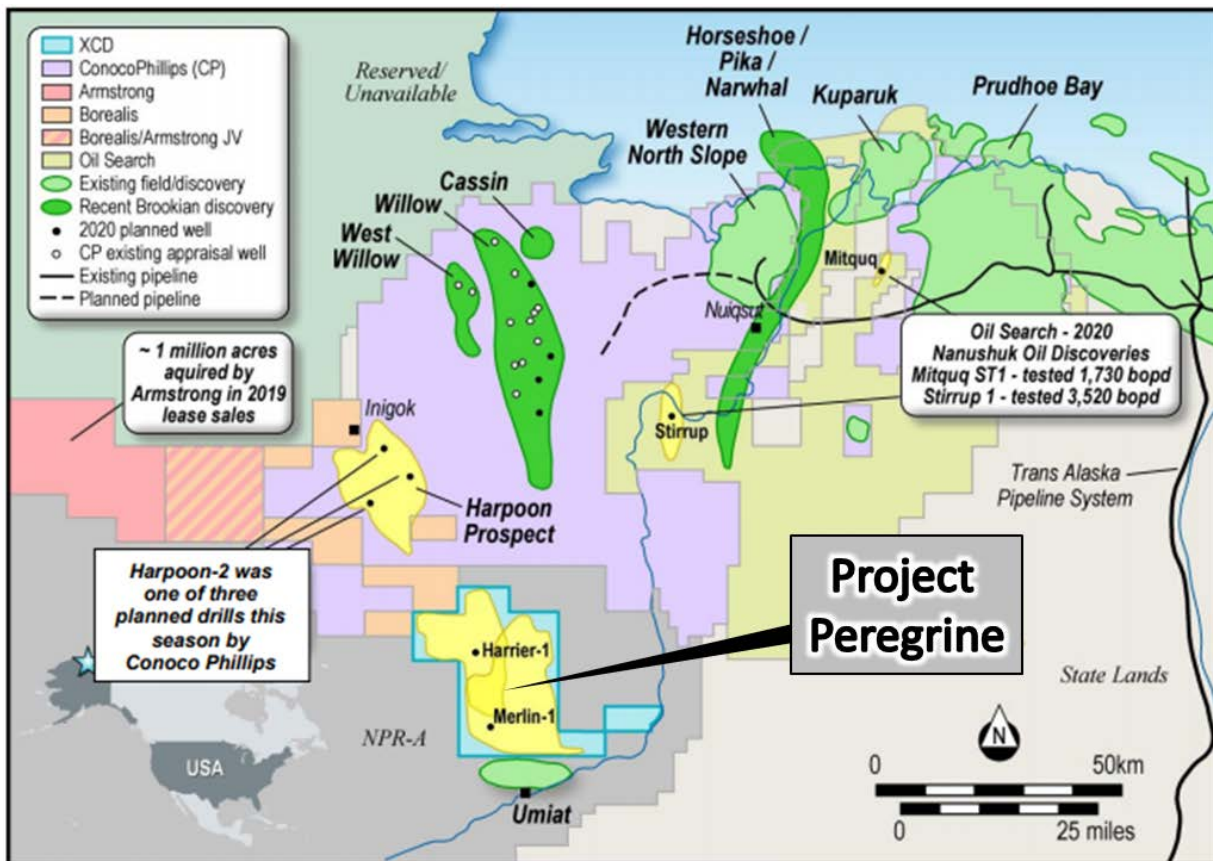


Figure 3-6: XCD acreage in relation to current North Slope Basin operators and activity⁴

⁴ It should be noted that the Umiat field to the south of the XCD leases is a different play concept to the Brookian play. The Umiat field is a detachment-anticline trap located at the northern limit of the fold and thrust belt.

4. Project Peregrine

4.1. Lease details

XCD has a 100% working interest in seventeen exploration leases in the North Slope Basin. The exploration lease areas total 195,373 acres. The leases have a 1.3% overriding royalty on them and the government royalty is 12.5%. The net entitlement interest to XCD is 86.2%, (Table 4-1).

Table 4-1: XCD exploration lease areas

Leases	Area (acres)	Start of current phase	End of current phase	XCD Working interest (%)	XCD Net entitlement (%)
3	35,423	March 2014	March 2024	100	86.2
10	114,167	March 2019	March 2029	100	86.2
4	45,783	March 2020	March 2030	100	86.2

RISC has not undertaken a physical inspection of the asset. This was not deemed necessary as no infrastructure is associated with the asset. RISC is satisfied that sufficient current information is available to allow an informed evaluation to be made without an inspection. Satellite imagery over the leases, provided in Figure 4-1, show that the area is Arctic muskeg with no obvious features that would prohibit future exploration activities such as seismic acquisition or exploration drilling.

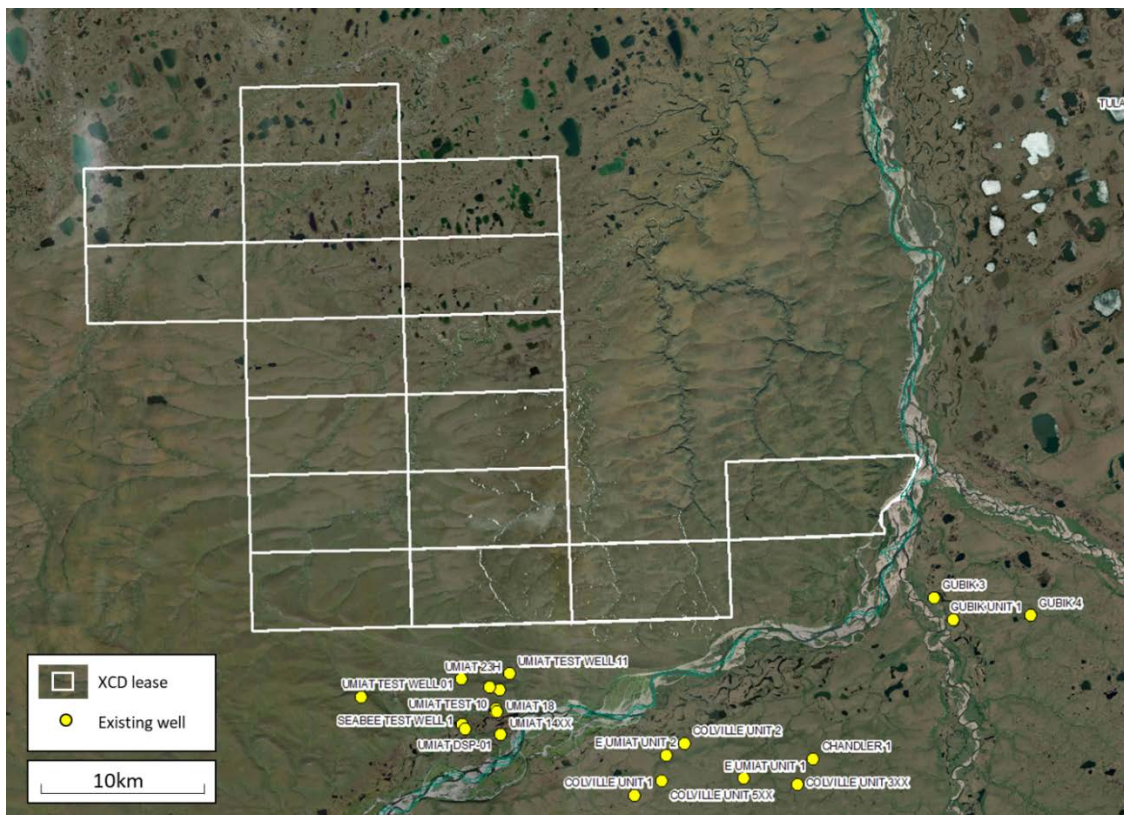


Figure 4-1: Satellite imagery over the XCD leases (Project Peregrine)

4.2. Data

There are nine regional 2D lines that traverse the lease position as shown on Figure 4-2.

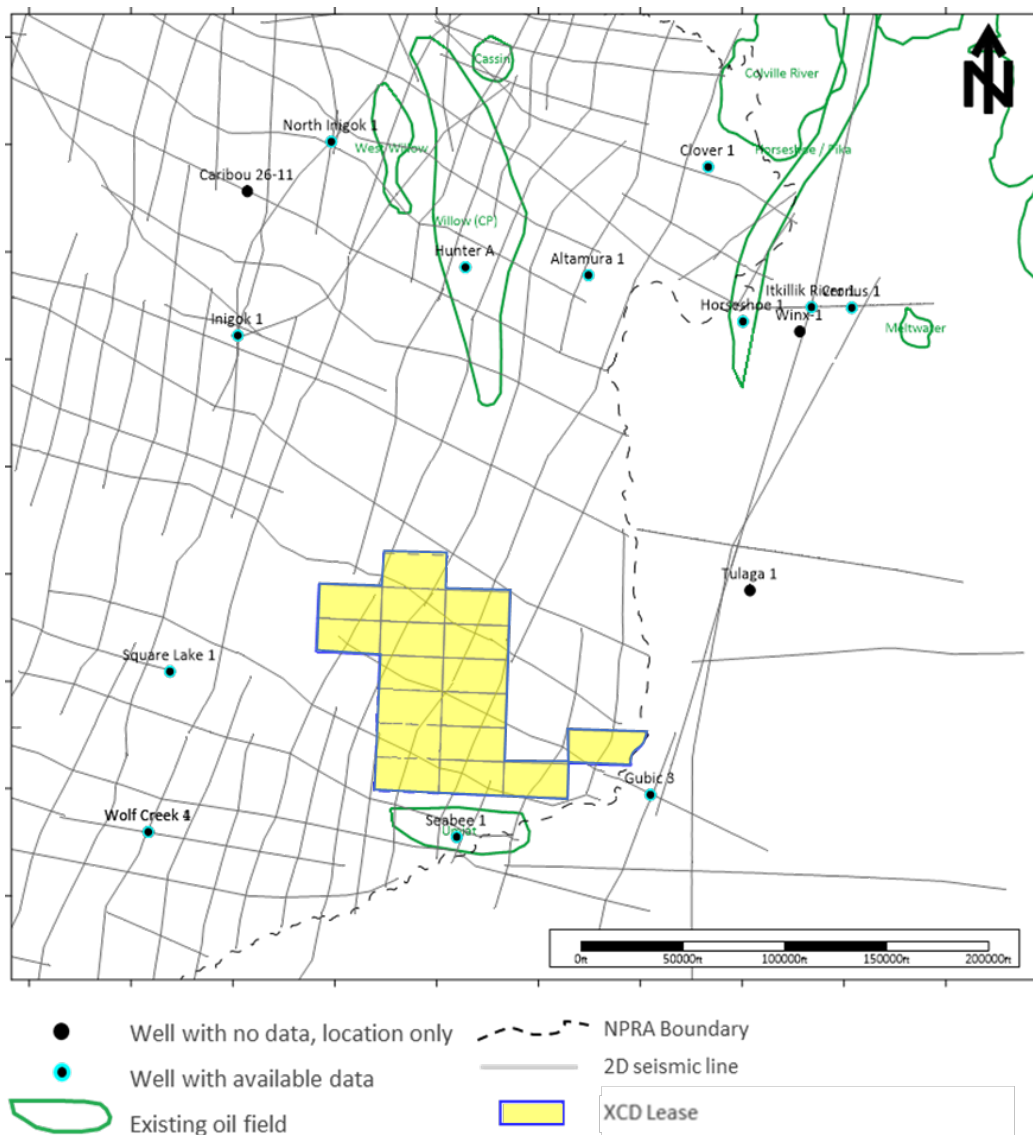


Figure 4-2: Project Peregrine seismic and well database

There are no existing wells on the lease position. RISC considers the area to be exploration immature with very limited data. The seismic data provided by XCD has not been loaded into a workstation and RISC has relied on the interpretations provided in various documents from XCD. This has not affected our opinion or valuation of Project Peregrine.

4.3. Resources estimate

ERCE has provided XCD with an estimate of prospective resources over Project Peregrine. The ERCE prospective resource estimate is provided on Table 4-2.

Table 4-2: ERCE (2020) estimate of prospective resources in Project Peregrine

Project Peregrine	Un-risked prospective resources (MMstb)						Geological chance of success ³
	1U (Low)		2U (Best)		3U (High)		
	Gross ¹	Net ²	Gross	Net	Gross	Net	
Merlin Prospect	48	41	313	270	1,698	1,463	18%
Harrier Prospect	56	48	240	207	1,091	940	15%
Harrier Deep Prospect	48	42	310	267	1,550	1,336	14%

Notes:

- 1) Gross = The 100% working interest on-lease prospective resource estimates.
- 2) Net = Net XCD entitlement calculated as 86.2% after deduction of state royalty (12.5%) and an overriding royalty interest (1.3%).
- 3) The risk estimates from ERCE are the chance of finding hydrocarbons at the P99 level (minimum). Each prospect has multiple reservoir targets. The risk estimate is the lowest risk reservoir target in the prospect.

RISC has not independently verified the resource and risk estimates and has relied on the ERCE estimates in our valuation. The resource and risk estimates appear reasonable.

4.4. Risk (Geological chance of success)

Estimates for geological chance of success were provided in the ERCE report. ERCE estimate the XCD prospects have a range of Geological Chance of Success between 7% and 18%. The lowest risk prospect / highest chance of success is the Merlin prospect. For each prospect, seal was identified as the key risk. This is due to the stratigraphic nature of the prospects and the limited current data to provide confidence on back-seal to the prospects.

4.5. Past costs

XCD has not provided RISC details of past expenditure on the leases. We understand that XCD has undertaken general desktop studies including reprocessing of existing regional 2D seismic, seismic interpretation including building a sequence stratigraphy framework, basin modelling and detailed petrophysical interpretation of surrounding wells. XCD has not acquired any seismic data or drilled any wells over the leases.

4.6. Work programs and commitments

XCD has advised that they have no work commitments on the leases. The leases are held by annual rental costs of US\$ 3 / acre. The annual rental cost to hold the position is US\$ 586,119.

5. Project Peregrine valuation

RISC estimates a fair market value range for Project Peregrine of between US\$ 3 million and US\$ 14.8 million with a best estimate of US\$ 9.6 million, (Table 5-1).

Table 5-1: Valuation of Project Peregrine (US\$ millions)

Asset	Valuation Range (US\$ millions)		
	Low	Best	High
Project Peregrine	3.0	9.6	14.8
Valuation rationale	Farm-in on a 1.2:1 promote	Farm-in on a 1.4:1 promote	Farm-in on a 1.6:1 promote

RISC considered two methods to value Project Peregrine:

- 1) Valuation using farm-in promotion factors;
- 2) Valuation using \$ / acre.

Both valuation methods used comparable transaction analysis. We consider the valuation from farm-in promotion factors to be the most appropriate method to value the project.

5.1. Comparable transaction analysis

To aid in our valuation, comparable transactions on exploration acreage deals have been identified. RISC has used a database compiled by GlobalData for identifying comparable transactions. A transaction was considered comparable if it met the following criteria:

- Conventional asset transactions in Alaska;
- Assets in the exploration stage as opposed to contingent resources, reserves and producing assets;
- Transactions occurring since the start of 2015;
- Transactions where the value has been disclosed.

Onshore Alaska has seen a modest amount of exploration farm-out activity in the last five years stimulated by new exploration discoveries in the area. The list of comparable transactions is presented in Table 5-2.

Table 5-2: Comparable transactions in the period January 2015 – May 2020 (GlobalData)

Date	Buyer	Seller	Total transaction value US\$ million	Acquired stake (%)	Farm-in promote X:1 (assumed)	Brief
Feb 2020	Armstrong Energy	Borealis Alaska Oil		72%	1.39	Armstrong acquires a 72 percent working interest in Borealis Alaska Oil's Castle West Prospect (92,000 acres) in the highly prospective Nanushuk Play Fairway.
Aug 2019	Premier Oil	88 Energy; Burgundy Xploration	23.00	60%	1.67	Premier Oil completes acquisition of 60% interest in Area A of Project Icewine acreage In Alaska from 88 Energy and Burgundy Xploration
Nov 2018	Oil Search	Armstrong Energy	8.00	100%	Sale	Oil Search completes acquisition of 50% Interest in oil and gas assets In Alaska North Slope from Armstrong Energy for US\$8 Million
Nov 2018	XCD Energy	Elixir Energy	3.61	100%	Sale	Entek Energy (XCD) completes acquisition of 100% interest in oil and gas leases in Alaska from Elixir
Sep 2018	88 Energy	Great Bear Petroleum	0.21	69%	1.45	88 Energy to acquire 69.1% Interest In 24,269 Acres in Alaska from Great Bear Petroleum for US\$0.21 Million
Sep 2018	Elixir Energy	Undisclosed	0.80	100%	Sale	Elixir Petroleum completes acquisition of oil and gas leases in Alaska
Jun 2018	88 Energy; Otto Energy; Red Emperor Resources	Pantheon Resources	4.00	79%	1.26	88 Energy, Otto Energy, And Red Emperor complete acquisition of 79.2% working interest In Western Blocks in Alaska from Great Bear Petroleum
Nov 2015	Undisclosed	Royale Energy	2.00	100%	Sale	Royale Energy completes sale of Western Block Acreage in Alaskan North Slope for US\$2 Million
Average promote in comparable transactions:					1.44	
NOTE: Shaded rows indicate a transaction on the Project Peregrine leases						

The average promote in comparable transactions in the area has been calculated as 1.44 : 1.

5.2. Valuation using farm-in promotion factors

The valuation using farm-in promotion factors assumes hypothetical farm-in scenarios.

In early 2020 XCD began a farm-out effort to attract potential investors into Project Peregrine. Two conceptual deal frameworks were considered by XCD. One farm-out scenario considered a company farming-in and paying a disproportionate amount on 3D seismic acquisition to de-risk the prospects prior to drilling. The estimated cost for 3D seismic acquisition over the leases is US\$ 15 million. A second farm-out scenario considered a lower-cost drilling model using a low-classification exploration rig and drilling two exploration wells on the project on the existing 2D seismic data. The cost of two exploration wells is also estimated at US\$ 15 million. These scenarios also envisaged the incoming farminee paying a share of XCD's acquisition costs (estimated to be US\$ 3.6 million (Table 5-2)).

In light of current market factors we have discounted the likely promotion factors achievable in the current environment and used a market-adjusted range of promotion factors in our valuation, (Table 5-3).

Table 5-3: Range of market-adjusted farm-in promotion factors used in our valuation

Market adjusted farm-in promotion factors	Low	Best	High
Range	1.2 : 1	1.4 : 1	1.6 : 1

The farm-in promotion factors determine the earned interest in the project. For example, a promotion factor of 1.4 : 1, with the farminee paying 100% of costs, calculates to the farminee earning 71% equity in the project, and carrying the farmor for the remaining 29% equity ($100\% / 1.4 = 71\%$). The buyer premium is calculated by multiplying the carried interest (29%) by the farm-in scenario cost (US\$ 15 million) ($29\% \times \text{US\$ } 15 \text{ million} = \text{US\$ } 4.3 \text{ million}$). The farmout scenario has also included the potential reimbursement of some of XCD's acquisition costs (US\$ 3.6 million). In the best case, we have assumed a farm-in scenario where the farminee will reimburse XCD for their earned equity share (71%) of the initial transaction costs ($71\% \times \text{US\$ } 3.6 \text{ million} = \text{US\$ } 2.6 \text{ million}$). The Transaction Value is the addition of the buyer premium and the amount of the acquisition cost reimbursed. The Project Value is calculated by grossing up the transaction value to 100% (Transaction Value / implied equity interest earned).

Our valuation calculation using our selected range of farm-in promotion factors is presented in Table 5-4.

Table 5-4: Valuation from farm-in promotion factors

Farm-out Scenario: Future commitments (gross)	All costs in US\$ millions		
Drilling of two exploration wells or 3D seismic acquisition	\$15.00		
	Low	Best	High
Promotion Factor range from comparable transaction analysis (X:1)	1.2	1.4	1.6
Paying interest (assumed)	100%	100%	100%
Implied equity interest earned in the project (from comparable transaction analysis)	83%	71%	63%
Carried interest	17%	29%	38%
Buyer Premium (i.e. carried interest x scenario costs (\$15.00))	\$2.5	\$4.3	\$5.6
Reimbursement of initial transaction cost. Buyer pays (assumption)	None	Equity share	100%
Initial transaction cost reimbursed	\$0.00	\$2.6	\$3.6
Transaction Value (i.e. Buyer Premium + Initial transaction cost reimbursed)	\$2.5	\$6.9	\$9.2
Project Value – Transaction Value / Implied equity interest earned	\$3.0	\$9.6	\$14.8

5.3. Valuation using \$/acre

A \$ / acre calculation was also considered as a valuation method.

The comparable transactions for the area (in which \$ /acre can be established) are presented in Table 5-5.

Table 5-5: Comparable transactions (\$/acre) in the period January 2015 – May 2020

Date	Buyer	Seller	Total transaction value US \$ million	Acquired stake (%)	Net Acres acquired	US\$ / acre
Nov 2018	XCD Energy	Elixir Energy	3.61	100%	149,590	24.1
Sep 2018	88 Energy	Great Bear Petroleum	0.21	69%	16,770	12.5
Nov 2015	Undisclosed Company	Royale Energy	2.00	100%	39,500	50.6
Average US\$ / acre in comparable transactions:						29.0
Note: Shaded rows indicate a transaction on the Project Peregrine leases						

The average \$ / acre for comparable transactions is calculated at US\$ 29 / acre. For our analysis, and in light of current market factors, we discounted the likely \$ / acre value achievable in the current environment and used a market adjusted range of \$ / acre values in our valuation, (Table 5-6).

Table 5-6: Range of market adjusted US\$ / acre estimates used in our valuation

	Low	Best	High
US\$ / acre range	10	20	40

Our valuation calculation from \$ / acre is presented in Table 5-7.

Table 5-7: Valuation from \$ / acre calculation

US\$ / acre	Low	Best	High
US\$ / acre range	10	20	40
Project Peregrine lease acres	195,373	195,373	195,373
Project Peregrine value in US\$ Millions based on \$ / acre	2.0	3.9	7.8

The \$ / acre calculation does not consider the quality, or potential for exploration success, of lease positions, and the proximity of lease positions to nearby exploration activity. We consider XCD has acquired their lease position at very low cost considering the potential of the leases. Additionally, given recent on-trend exploration success, it is our opinion that the \$ / acre valuation under-estimates the value of Project Peregrine.

5.4. Valuation summary

RISC considered two valuation methods as described in Section 2.1.3. Given the lack of significant sunk costs, lack of work program commitments, and the technical immaturity of the asset, valuation using comparable transactions was considered most appropriate.

The asset was valued using farm-in promotion factors and \$ / acre from comparable transactions.

The North Slope Basin or Alaska has shown significant farm-in interest in recent years due to notable exploration success. Project Peregrine is on trend with recent discoveries and we consider the project would have had an excellent chance of being farmed out on promoted terms comparable to recent transactions in the area. As such, we considered farm-in promotion factors to be the most appropriate method for the valuation.

The valuation range provided on Table 5-1 is our independent assessment of the current market value of Project Peregrine. The range represents our estimate of the value that Project Peregrine would change hands for as of the date of this report in an open and unrestricted market between a willing buyer and a willing seller in an ‘arm’s length’ transaction, with each party acting knowledgeably, prudently and without compulsion.

5.5. Valuation assumptions

Our valuation has assumed that Project Peregrine has the quality and attractiveness to be farmed-out on a promoted basis in a transaction comparable to recent market activity seen in the North Slope Basin. In our analysis we used a range of potential farm-in promotion factors which we have judged appropriate given current market conditions and comparable transaction analysis. The wide valuation range is due to the exploratory nature of the asset, the dependency on a successful farm-out, and current investment uncertainty in the oil and gas sector.

6. Declarations

6.1. Qualifications

RISC is an independent oil and gas advisory firm. The RISC staff engaged in this assignment include qualified petroleum reserves and resources evaluators as specified in ASX listing rules, engineers, geoscientists and commercial analysts, each with many years of relevant experience and most have in excess of 20 years.

RISC was founded in 1994 to provide independent advice to companies associated with the oil and gas industry. Today the company has approximately 40 highly experienced professional staff at offices in Perth and Brisbane, Jakarta and London. Our services cover the entire range of the oil and gas business lifecycle and include:

- Oil and gas asset valuations, expert advice to banks for debt or equity finance;
- Exploration/Portfolio management;
- Field development studies and operations planning;
- Reserves assessment and certification, peer reviews;
- Gas market advice;
- Independent Expert/Expert Witness;
- Strategy and corporate planning.

The preparation of this report has been undertaken by **Mr Ian Cockerill**, Head of Geoscience. Ian is a Petroleum Geologist with 20 years of experience and a successful record of value creation through oil and gas discoveries, new venture development, and asset / corporate promotion. Ian has a background in geological and geophysical interpretation with experience in conventional and unconventional exploration and development projects in a wide range of geological settings. He has worked in technical positions for Hunt Oil and Apache Energy and in executive positions for Transerv Energy, Verona Energy and TSV Montney. Ian is a member of the Petroleum Exploration Society of Australia (PESA), American Association of Petroleum Geologists (AAPG), Petroleum Exploration Society of Great Britain (PESGB), South East Asia Petroleum Exploration Society (SEAPEX) and the Canadian Society of Petroleum Geologists (CSPG). Ian has an MSc. in Basin Evolution and Dynamics from Royal Holloway College, University of London, UK (1999) and a BSc. Geological Sciences with 1st Class (Honours) from the University of Leeds, UK (1996). Ian is a qualified petroleum reserves and resources evaluator (QPPRE) as defined by ASX listing rules and is a full-time employee of RISC.

6.2. ASIC Regulatory Guides and VALMIN

This Report has been prepared by RISC in accordance with the Australian Securities and Investment Commission (ASIC) Regulatory Guides 111 and 112 and the VALMIN Code 2015.

6.3. Petroleum Resources Management System

In the preparation of this Report, RISC has applied the guidelines and definitions of the Petroleum Resources Management System approved by the Board of the Society of Petroleum Engineers in 2018 (PRMS).

6.4. Report to be presented in its entirety

RISC has been advised by BDO that this report will be presented in its entirety without summarisation. RISC provides consent for BDO to use this report in the form and context in which it will be published.

6.5. Independence

This report does not give and must not be interpreted as giving, an opinion, recommendation or advice on a financial product within the meaning of section 766B of the Corporations Act 2001 or section 12BAB of the Australian Securities and Investments Commission Act 2001.

RISC is not operating under an Australian financial services licence in providing this report.

In accordance with regulation 7.6.01(1)(u) of the Corporations Regulation 2001. RISC makes the following disclosures:

- RISC is independent with respect to XCD and confirms that there is no conflict of interest with any party involved in the assignment;
- Under the terms of engagement between RISC and BDO for the provision of this report, RISC received a fixed fee of A\$25k from XCD. No part of the fee was contingent on the conclusions reached, or the content or future use of this report. Except for this fee, RISC has not received and will not receive any pecuniary or other benefit whether direct or indirect for or in connection with the preparation of this report;
- Neither RISC nor any of its personnel involved in the preparation of this report has any material interest in XCD or in any of the properties described herein;
- RISC has not provided advice to XCD specifically in relation to the Proposed Transaction.
- RISC has not prepared any previous reports for XCD over the last two years.

6.6. Limitations

The assessment of petroleum assets is subject to uncertainty because it involves judgments on many variables that cannot be precisely assessed, including reserves, future oil and gas production rates, the costs associated with producing these volumes, access to product markets, product prices and the potential impact of fiscal/regulatory changes.

The statements and opinions attributable to RISC are given in good faith and in the belief that such statements are neither false nor misleading. In carrying out its tasks, RISC has considered and relied upon information obtained from XCD as well as information in the public domain.

The information provided to RISC has included both hard copy and electronic information supplemented with discussions between RISC and senior XCD staff.

Whilst every effort has been made to verify data and resolve apparent inconsistencies, we believe our review and conclusions are sound, but neither RISC nor its servants accept any liability, except any liability which cannot be excluded by law, for its accuracy, nor do we warrant that our enquiries have revealed all of the matters, which an extensive examination may disclose. We believe our review and conclusions are sound, but no warranty of accuracy or reliability is given to our conclusions.

Our review was carried out only for the purpose referred to above and may not have relevance in other contexts.

This report was substantially completed by 19 May 2020. We are not aware of any changes since that date that would have a material impact on the values and opinions contained within this report.

6.7. Consent

RISC has consented to this report, in the form and context in which it appears, being included in the independent expert report. Neither the whole nor any part of this report nor any reference to it may be included in or attached to any other document, circular, resolution, letter or statement without the prior consent of RISC.

This Report is authorised for release by Ian Cockerill dated 19 May 2020.

A handwritten signature in black ink, appearing to be "Ian Cockerill".

Ian Cockerill

Head of Geoscience

7. List of terms

7.1. Abbreviations

The following table lists abbreviations commonly used in the oil and gas industry and which may be used in this report.

Term	Definition
1P	Equivalent to Proved reserves or Proved in-place quantities, depending on the context.
1Q	1st Quarter
2P	The sum of Proved and Probable reserves or in-place quantities, depending on the context.
2Q	2nd Quarter
2D	Two dimensional
3D	Three dimensional
4D	Four dimensional
3P	The sum of Proved, Probable and Possible reserves or in-place quantities, depending on the context.
3Q	3rd Quarter
4Q	4th Quarter
AFE	Authority for expenditure
bbl	US barrel
bbl/d	US barrels per day
Bcf	Billion (10 ⁹) cubic feet
Bcm	Billion (10 ⁹) cubic meters
BFPD	Barrels of fluid per day
BOPD	Barrels of oil per day
BTU	British thermal units
BOEPD	US barrels of oil equivalent per day
BWPD	Barrels of water per day
°C	Degrees Celsius
Capex	Capital expenditure
CAPM	Capital asset pricing model
CGR	Condensate gas ratio
CO ₂	Carbon dioxide
cP	Centipoise
CPI	Consumer price index
DEG	Degrees
DHI	Direct hydrocarbon indicator
DST	Drill stem test
E&P	Exploration and production
EMV	Expected monetary value
EOR	Enhanced oil recovery
ESMA	European Securities and Markets Authority
ESP	Electric submersible pump

Term	Definition
EUR	Estimated ultimate recovery
F	Degrees Fahrenheit
FDP	Field development plan
FEED	Front end engineering and design
FID	Final investment decision
FM	Formation
FPSO	Floating production, storage and offtake unit
FWL	Free water level
FVF	Formation volume factor
GIIP	Gas initially in place
GJ	Gigajoules (10^9 J)
GOC	Gas-oil contact
GOR	Gas oil ratio
GRV	Gross rock volume
GSA	Gas sales agreement
GTL	Gas to liquid(s)
GWC	Gas water contact
H ₂ S	Hydrogen sulphide
HHV	Higher heating value
ID	Internal diameter
IRR	Internal rate of return
JV(P)	Joint venture (parties)
Kh	Horizontal permeability
km ²	Square kilometres
Krw	Relative permeability to water
Kv	Vertical permeability
kPa	Kilopascals (thousand Pascal)
Mstb/d	Thousand stock tank barrels per day
LIBOR	London inter-bank offered rate
LNG	Liquefied natural gas
LTBR	Long-term bond rate
m	Metres
MDT	Modular dynamic (formation) tester
mD	Millidarcies
MJ	Megajoules (10^6 J)
MMbbl	Million US barrels
MMscf(/d)	Million standard cubic feet (per day)
MMstb	Million US stock tank barrels
MOD	Money of the day (nominal dollars)
MOU	Memorandum of understanding
MMcfe	Millions of Cubic Feet Equivalent
Mscf	Thousand standard cubic feet

Term	Definition
Mstb	Thousand US stock tank barrels
MPa	Megapascal (10^6 Pa)
mss	Metres subsea
MSV	Mean success volume
mTVDss	Metres true vertical depth subsea
MW	Megawatt
NPV	Net present value
NTG	Net to gross
ODT	Oil down to
OGIP	Original gas in place
OOIP	Original oil in place
Opex	Operating expenditure
OWC	Oil-water contact
P & A	Plug and Abandon (abandonment of wells)
PBU	Pressure bXCDd-up
PJ	Petajoules (10^{15} J)
POS	Probability of success
PRMS	Petroleum Resources Management System
PSC	Production sharing contract
PSDM	Pre-stack depth migration
PSTM	Pre-stack time migration
psia	Pounds per square inch pressure absolute
p.u.	Porosity unit
PVT	Pressure, volume and temperature
QA/QC	Quality assurance/ control
rb/stb	Reservoir barrels per stock tank barrel (at standard conditions)
RFT	Repeat formation tester
RT	Rotary table or real terms, depending on context
SC	Service contract
scf	Standard cubic feet (measured at 60 degrees F and 14.7 psia)
Sg	Gas saturation
Sgr	Residual gas saturation
SRD	Seismic reference datum lake level
SPE	Society of Petroleum Engineers
s.u.	Fluid saturation unit
stb	Stock tank barrels
STOIIP	Stock tank oil initially In place
Sw	Water saturation
TCM	Technical committee meeting
Tcf	Trillion (10^{12}) cubic feet
TJ	Terajoules (10^{12} J)
TLP	Tension leg platform

Term	Definition
TRSSV	Tubing retrievable subsurface safety valve
TVD	True vertical depth
US\$	United States dollar
US\$ million	Million United States dollars
WACC	Weighted average cost of capital
WHFP	Well head flowing pressure
WPC	World Petroleum Council
WTI	West Texas Intermediate

7.2. Definitions

The following table lists some definitions for terms commonly used in the oil and gas industry and which may be used in this report.

Term	Definition
Contingent Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources are a class of discovered recoverable resources as defined in the SPE-PRMS.
Discount Rate	The interest rate used to discount future cash flows into a dollars of a reference date
Expectation	The mean of a probability distribution.
P90, P50, P10	90%, 50% & 10% probabilities respectively that the stated quantities will be equalled or exceeded. The P90, P50 and P10 quantities correspond to the Proved (1P), Proved + Probable (2P) and Proved + Probable + Possible (3P) confidence levels respectively if probabilistic techniques are used.
Possible Reserves	As defined in the SPE-PRMS, an incremental category of estimated recoverable volumes associated with a defined degree of uncertainty. Possible Reserves are those additional reserves which analysis of geoscience and engineering data suggest are less likely to be recoverable than Probable Reserves. The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P) which is equivalent to the high estimate scenario. When probabilistic methods are used, there should be at least a 10% probability that the actual quantities recovered will equal or exceed the 3P estimate.
Probable Reserves	As defined in the SPE-PRMS, an incremental category of estimated recoverable volumes associated with a defined degree of uncertainty. Probable Reserves are those additional Reserves that are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves. It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable Reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate.
Prospective Resources	Those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations as defined in the SPE-PRMS.
Proved Reserves	As defined in the PRMS, an incremental category of estimated recoverable volumes associated with a defined degree of uncertainty Proved Reserves are those quantities of petroleum, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods, and government regulations. If deterministic methods

Term	Definition
	are used, the term reasonable certainty is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. Often referred to as 1P, also as “Proven”.
Reserves	Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must further satisfy four criteria: they must be discovered, recoverable, commercial, and remaining (as of the evaluation date) based on the development project(s) applied. Reserves are further categorised in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by development and production status.
Working interest	A company’s equity interest in a project before reduction for royalties or production share owed to others under the applicable fiscal terms.