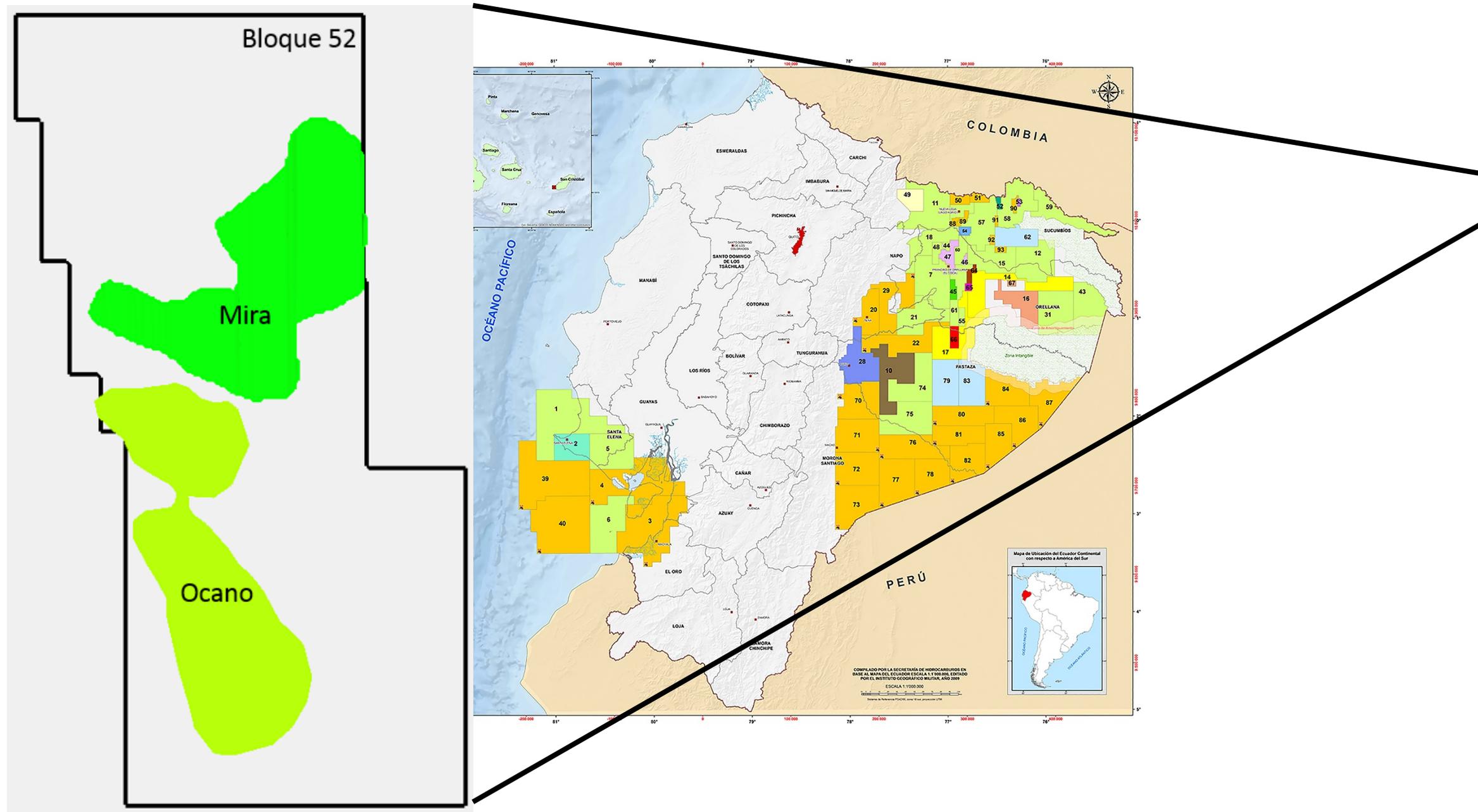
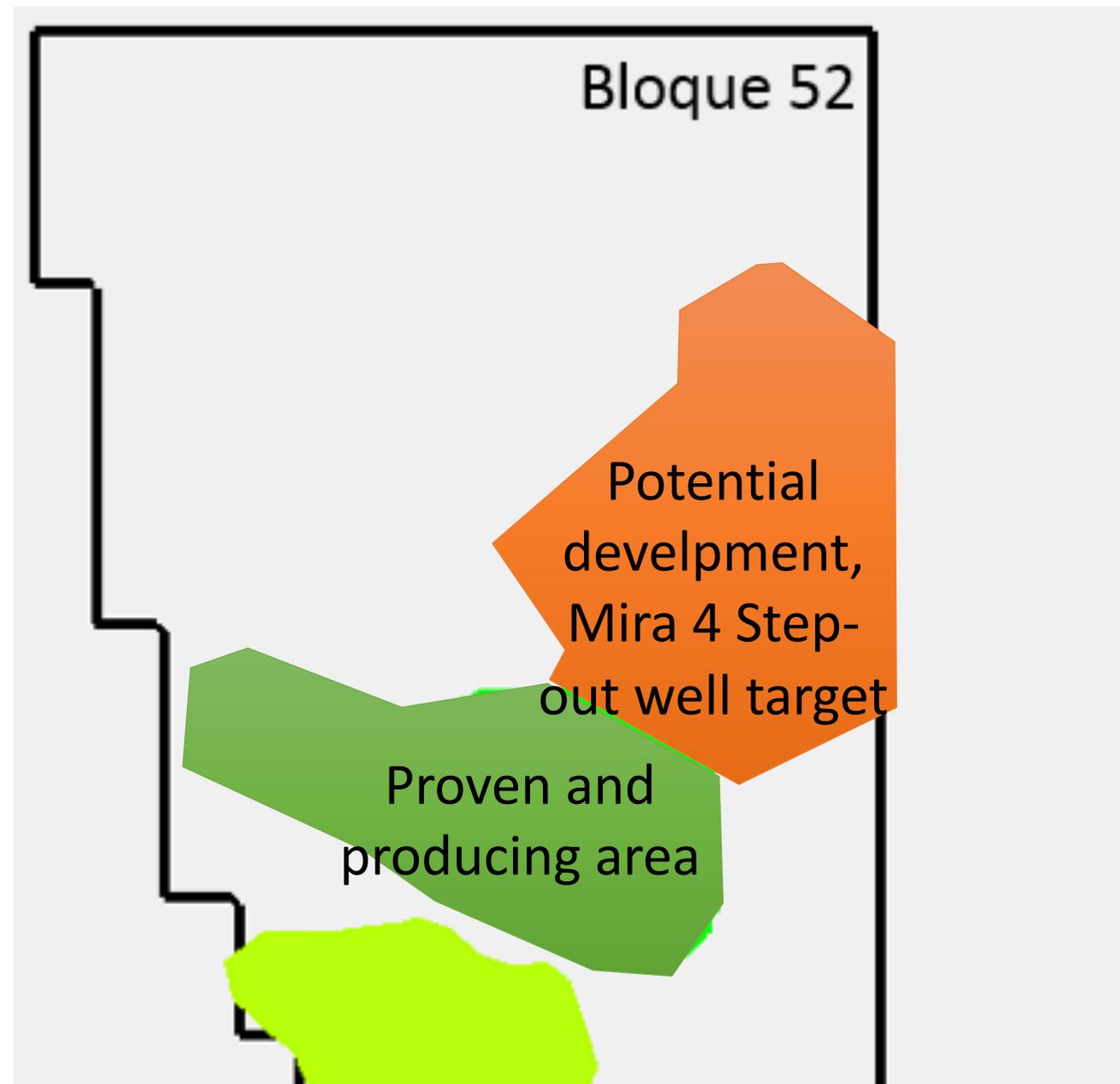


Evaluation of development options for the Mira field using a cloud-based solution

Location



Mira Field



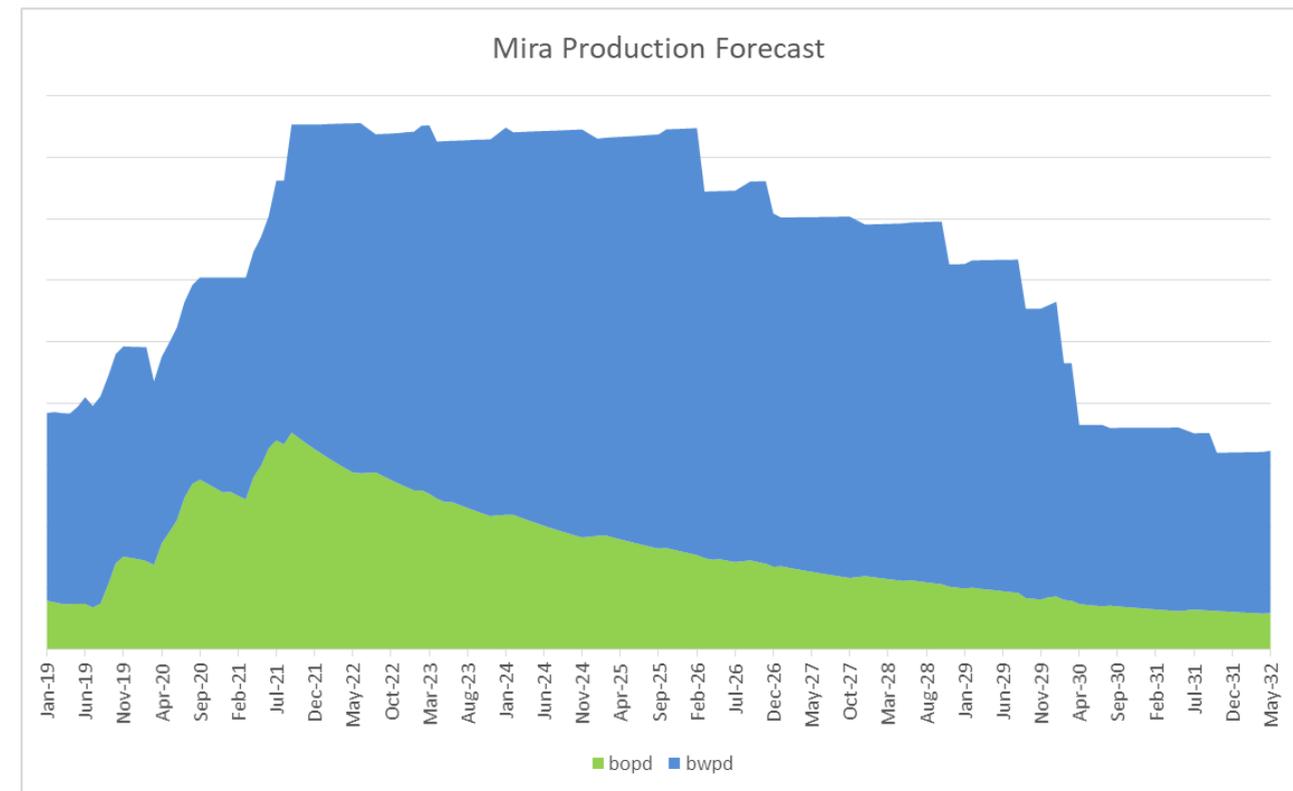
Operating conditions

- Fixed tariff fee service contract
- Production process facilities work at 80% capacity
- Wellpad for already in operation with temporary facilities for 1 well (Mira 3)
- Using vacuum truck transportation to production process facilities (9Km.)



Development plan concerns

- New well Mira 4 is the key milestone
- Ambitious drilling campaign would require facility expansion
- Development plan approval process might lead to service fee negotiations
- Major KPI's
 - Payback
 - IRR /NPV
 - Cash max exposure



Decision Making: Speed is key

- Production facility expansion is dependent on results of Mira 4
- Decision making process has to be quick and agile
- Shared work-space and agile revision of these scenarios is crucial to achieve a timely decision



Scenarios and Decisions

Assess different combinations of development options:

- Production results
 - P90
 - P50
 - P10
- Drilling campaign
 - 4 to 6 wells per year
 - Continue drilling campaign (drilling & completion)
- Contract renegotiation with government
- Production facilities
 - Resize of production facilities
 - Three-phase flow line



FDPlan benefits

- Integration
- Alignment
- UX
- Reliability
- Risk Management

FDPlan benefits

- **Integration**
- Alignment
- UX
- Reliability
- Risk Management

allows for an open, collaborative, cloud-based platform where updating and analyzing options is quick and reliable

Studies / Mira Field Development (PoC)
Mira Field Development (PoC)

Overview Risks Decisions Scenarios Deliverables Data

Study Overview

Study Information [Study Information](#)

Details		Commercial
Stage	Status	License
Conceptualizatio...	In Progress - Dive...	-
Stage End	FID	Blocks
Dec 31, 2032	Nov 30, 2019	52
Description		Operator
Mira Field development (FDP)		Orion Energy
The main alternatives to produce an oil of 27		Partners
Show All		PAM (NOC - Petroamazonas)

Field



Ecuador

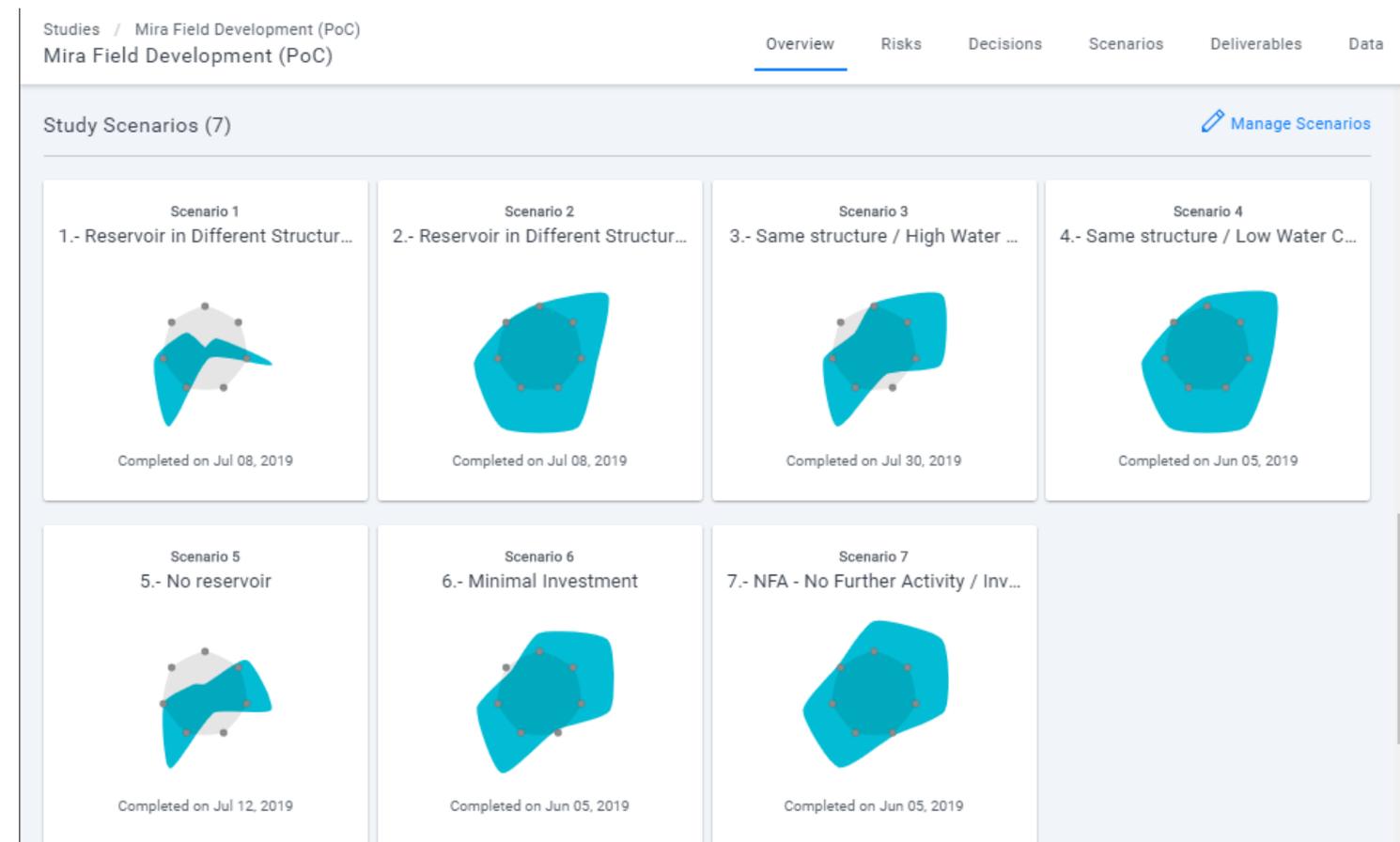
Field Name	Type	Environment	Latitude	Longitude
Mira	Greenfield	Onshore	0.2	-76.5



FDPlan benefits

- Integration
- **Alignment**
- UX
- Reliability
- Risk Management

helpful in finding a solution in which operational and business objectives are fully aligned



FDPlan benefits

- Integration
- Alignment
- **UX**
- Reliability
- Risk Management

graphic, easy-to-present results which visually frame the different scenarios based on how they perform under the KPOs established by the board



FDPlan benefits

- Integration
- Alignment
- UX
- **Reliability**
- Risk Management

allows for quick tracking of deliverables and information updates by the team involved

Studies / Mira Field Development (PoC)
Mira Field Development (PoC)

Overview Risks Decisions Scenarios **Deliverables** Data

Deliverables [+ Add Deliverables](#)

Deliverable	Due Date	Contributors	Status
Ecuador block map	Feb 1, 2019	Tapia Johnny	Approved
Framing session output	Feb 1, 2019	Tapia Johnny, Gonzalez Eduardo, Rick Lobrecht, Galvin Singh Shergill	Approved
OWC_map	Mar 1, 2019	Tapia Johnny	In Progress
Depth_2D	Feb 15, 2019	Christian Vega, Tapia Johnny	Pending Approval
UI_Depth_3D	Feb 15, 2019	Tapia Johnny	Pending Approval
Depth_Mira	Feb 22, 2019	Christian Vega, Jos David Burgos	Pending Approval
XS_Mira	Feb 15, 2019	Tapia Johnny	Pending Approval
Peep_File	Mar 29, 2019	Gonzalez Eduardo	Requested
SIS Management Checkpoint presentation	Mar 19, 2019	Tapia Johnny, Gonzalez Eduardo, Rick Lobrecht	Approved
1.- Decline curves for 1.- Reservoir in Different Structure / High Water Contact / New Contract	Mar 22, 2019	Tapia Johnny	Pending Approval
1.- Drilling Constraints for 1.- Reservoir in Different Structure / High Water Contact / New Contract	Mar 22, 2019	Tapia Johnny	Approved
1.- Economic Framework for 1.- Reservoir in Different Structure / High Water Contact / New Contract	Mar 22, 2019	Gonzalez Eduardo	Pending Approval

FDPlan benefits

- Integration
- Alignment
- UX
- Reliability
- **Risk Management**

It incorporates uncertainty, as well as risk assessment and management tools into the building process

Studies / Mira Field Development (PoC)
Mira Field Development (PoC)

Study Risks + Add Risks

Risk	Category	Severity	Owners	Status
Test	Technical	Not calculated	No owner assigned	Closed
Flooding	Technical	4	Edison Bedoya	In Progress
Drilling schedule delay	Technical	3	Edison Bedoya	In Progress
Flow assurance issues	Technical	3	Edison Bedoya	In Progress
Service fee contract renegot...	Commercial	4	Humberto Andrade	In Progress
Ecuador instability	Political	4	Fernando Emanuele	In Progress

The Future

- FDPlan is extremely helpful for decision making
- Digital transformation will allow platforms to integrate with IoT data
 - to improve knowledge
 - benchmarking
 - forecasting of critical assumptions
- Digital technology could be used to improve in the execution phase
 - achieve the KPOs that were the basis for their inception