



## HANNON WESTWOOD UKCS EXPORT HUB ANALYSIS

### A NEW AND UNIQUE BUSINESS PLANNING TOOL

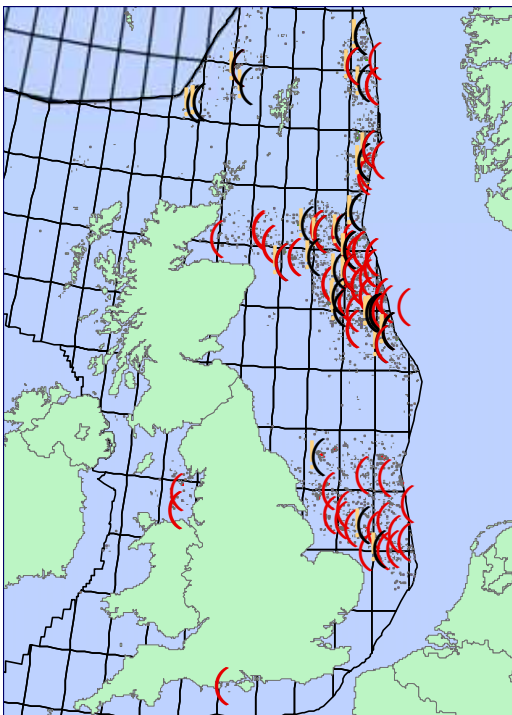
#### Background

Hannon Westwood recently completed a major UKCS study for OGUK, with the collaboration of DECC, investigating the longevity of UKCS infrastructure, the timing of decommissioning of export hubs and the impact on ultimate recovery of the loss of hubs. The analysis takes account of incremental projects on existing fields, all existing discoveries and an inventory of nearly 2000 prospect and leads amounting to some 10 bn boe risked prospective resource. Various scenarios were considered, but all show that many export hubs and pipelines effectively disappear within 10 to 15 years and some much sooner.

One of the issues is that the existing infrastructure was built for large throughput. Maintaining that infrastructure is expensive and fixed costs are high and driven by global competition for limited resources.

Furthermore, whereas larger discoveries will justify stand-alone development, many (most) undeveloped discoveries are too small for standalone development and future exploration will, by and large, find smaller pools. The hub analysis work suggests that many discoveries and potential future discoveries are at risk as hubs shut down.

#### Business Planning – A New Dimension



From a business planning standpoint it is, therefore, imperative that companies understand the context of their assets, whether discovery or prospect, in terms of which hubs might be available and longevity, which may drop out, timing of ullage availability, what are the constraints, what are the competing opportunities, and other issues flagged by hub analysis.

By 2020 more than  
50% of “live” hubs  
have shut down

- Live
- Lost



In essence, given the maturity of the basin, declining throughput and the potential loss of infrastructure, hub analysis should be applied as a routine part of the business planning process.

Hannon Westwood's Hub Analysis Tool is unique in the industry and allows companies rapidly to assess likely export options and issues, as noted above, relating to their discoveries and high-graded prospects as well as new business opportunities (farm-ins, license rounds, asset or acreage deals). Equally, the tool allows infrastructure owners to understand better the likely or potential future throughput, providing key insights for planning purposes.

### **How the Tool Works**

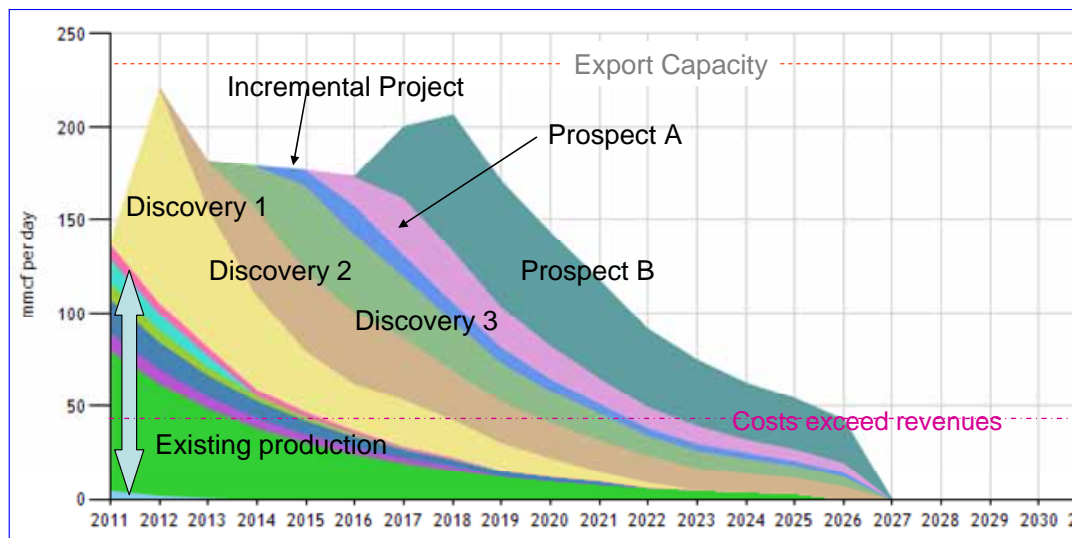
The tool exploits Hannon Westwood's proprietary and comprehensive resource database:

- ◆ Producing fields – base production forward and planned/expected incremental projects
- ◆ Planned developments
- ◆ All other undeveloped discoveries
- ◆ 2000 undrilled prospects/leads

The tool incorporates an economic estimator. Inputs include all standard variables, such as oil and gas prices, discount rate, inflation etc. This is used to calculate commercial indicators for all opportunities competing for available ullage (incremental programmes, discoveries, prospects). Other variables in the model include E&A success rates, basin drill-out rate and maximum tie-back distance. Those opportunities that fail to pass commercial hurdles are rejected. Other opportunities are then assigned to a hub based on several factors: fluid type, proximity, common ownership, available ullage capacity. Any discovery or prospect may have potential to attach to any one of several hubs, depending on location. Hub life expectancy is then estimated based on revenues from projected throughput versus fixed cost. Hubs will die when costs exceed revenues generated.

Outputs include, but are not restricted to:

- ◆ Projected hub throughput profiles showing base production and phasing/timing of incrementals, discoveries and prospects over the hub, hub cessation (see chart, below);
- ◆ For individual discoveries or prospects – hub alternatives, availability and timing of ullage in each hub, commercial indicators, start of production and COP;
- ◆ Hub revenue streams;
- ◆ Scenarios to reflect changes in product prices, different discount rates, varying tie-back distances and so on.



Analysis of the above example illustrates how the tool outputs can be used:

- Based on existing production, tariff revenues will not cover costs beyond 2015 and the hub may shut down
- Cost sharing could be an option, but would only extend life by 2-3 years
- Longevity of the hub is dependent on development of discoveries and future exploration success within the catchment
- What is the status of the discoveries? How robust are they? Can they attach to other hubs? Which are the competing hubs and what is their status?
- Should I acquire discovery 3 – will the hub survive long enough to justify the acquisition?
- Will the hub survive long enough to justify the incremental project?
- Should I drill/farm-in to prospect A? Will the hub be available? Is there another hub it could attach to?

Hub analysis will point to the key questions and uncertainties to be considered for business planning.

### Applications and Benefits

The tool has clear applications for business planning whether you are a discovery/prospect owner or hub owner; or if you are weighing farm-in opportunities, license round applications or acreage/asset acquisitions or swaps.

The benefits to companies include:

- ◆ Understanding the context of assets or business opportunities in terms of potential hub availability and longevity;
- ◆ Timing of ullage availability and constraints;
- ◆ Identification of competing opportunities;
- ◆ Inform tactical and strategic decisions.



***UK Office***

Charles Westwood:

[charleswestwood@hannonwestwood.com](mailto:charleswestwood@hannonwestwood.com)

Karen Alford:

[karenalford@hannonwestwood.com](mailto:karenalford@hannonwestwood.com)

***Houston Office***

Clyde Vanderbrouk:

[clydevanderbrouk@hannonwestwood.com](mailto:clydevanderbrouk@hannonwestwood.com)

**HW Atlas Limited**

100 Brand Street

Glasgow G51 1DG

Tel: +44 (0) 141 534 7903

Fax: +44 (0) 141 419 9949

[www.hannonwestwood.com](http://www.hannonwestwood.com)