

.NTL No. 2010-N06
Information Requirements for EPs,
DPPs and DOCDs on the OCS
Effective June 18, 2010

Frequently Asked Questions (FAQ's)
Updated July 15, 2010
Updated July 21, 2010
Updated August 10, 2010

1. Q. What OCS areas are affected by this NTL?

A. This is a national NTL; it applies to EPs, DPPs, and DOCDs in the Gulf of Mexico, Pacific and Alaska OCS areas.

2. Q. What water depths does this NTL affect?

A. This NTL affects EPs, DPPs, and DOCDs that propose activities in both shallow water and deepwater (for purposes of this NTL, water depths less than 500' and water depths 500' and deeper, respectively).

3. Q. What plans are subject to these information requirements?

You must submit the additional information with a new EP, DPP or DOCD, or as additional information for your previously-approved or pending plan. You must submit this information under the following circumstances:

- Those pending or approved plans or documents that propose to conduct an activity that requires approval of an APD, and the APD is submitted after June 18, 2010 or was filed but had not been approved by that date; and
- Those plans or documents that propose to conduct an activity that requires approval of an APD, and the initial, supplemental, or revised EP, DPP, or DOCD that covers the activity is submitted after June 18, 2010.

4. Q. For what plans do I not need to submit information required by this NTL?

A. You do not need to submit the additional information for the pending or approved EPs, DPPs, and DOCDs in order to conduct the following activities:

- Activities for which an APD was approved by BOEMRE prior to June 18, 2010
- Drilling intervention or relief wells for emergency purposes;
- Drilling, waterflood, gas injection, or disposal wells;
- Drilling operations or other activities that are necessary to safely shut in, temporarily abandon, or decommission a well, or to accomplish well completion operations under 30 CFR 250.500; and

Activities that do not require the submittal and approval of an APD.

5. Q. What if I am currently conducting a rig-related workover or am waiting on an APM approval to conduct a rig-related workover?

A. You may conduct the workover without submitting additional information for your EP, DPP, or DOCD.

6. Q. I have a pending application for a lease pipeline or a pending platform application, will it be held in abeyance pending submittal of the information required by this NTL?

A. No.

7. Q. If this NTL does not require me to submit additional information for my plan, when may I conduct operations?

A. If you want to conduct an activity that does not require you to submit the additional information required by this NTL, you may conduct the activity if you have received all necessary approvals and have complied with the Safety NTL.

8. Q. When should I submit this information?

A. If you want to conduct an activity that requires approval of an APD, and the APD has not been approved by BOEMRE, you should submit the information listed in the NTL to BOEMRE as soon as reasonably possible to allow BOEMRE the opportunity to review it prior to the decision on your APD.

9. Q. Will BOEMRE inform me of its approval of the information I submit?

A. No. BOEMRE will notify you if you need to submit additional information or need to submit a revised plan. If the information you submit is sufficient, BOEMRE will process your APD for approval.

10. Q. If my shallow water APD was approved prior to June 18, 2010 but I submitted an APM only in order to transmit the information required by the Safety NTL, must I submit the additional information required by this NTL?

A. No.

11. Q. Where do I submit this additional information?

A. For the Gulf of Mexico OCS Region, submit the additional information described in this NTL by mailing it to: Regional Supervisor, Field Operations Plans Section (MS 5231) Bureau of Ocean Energy Management, Regulation, and Enforcement, Gulf of Mexico OCS Region, 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123-2394. For the Alaska and Pacific OCS Regions, submit the additional information described in this NTL to the address and contact for the respective OCS Region that is used to submit EPs,

DPPs, and DOCDs. For additional information submitted for approved plans or documents, provide the Plan Control Number of the referenced plan or document and include and Well Name of the well for which you provided blowout and worst-case discharge scenario information.

12. Q. If my EP, DPP or DOCD was previously approved and I need to submit the additional information, do I simply submit it or must I obtain approval of the changes prior to obtaining APD approval? If so, do I submit the information as a revised plan?

A. Simply submit the information to BOEMRE. You do not need to submit a revised plan unless you are specifically requested to do so.

13. Q. Since plan approval is not required for sidetracks, no revisions to my previously approved plan will be required, correct?

A. Approval of an EP, DPP, or DOCD is required to cover sidetracks that cross into a lease not covered by the plan. In all other cases, you do not need to revise a previously approved plan to cover a sidetrack.

14. Q. How should I calculate the daily discharge rate for the worst case discharge scenario?

A. You should determine the daily rate of an uncontrolled flow from all producible reservoirs into the open wellbore. The package of reservoirs exposed to an open borehole with the greatest discharge potential will be considered the worst case discharge scenario. Shallower producible reservoirs isolated by casing and cement will not be considered in the uncontrolled flow.

15. Q. May I consider additional factors in determining the worst case discharge rate?

A. 30 CFR 254.47(b) states "... the size of your worst case discharge scenario is the daily volume possible from an uncontrolled blowout. In determining the daily discharge rate, you must consider any known reservoir characteristics. If reservoir characteristics are unknown, you must consider the characteristics of analog reservoirs from the area and give an explanation for the selection of the reservoir(s) used." You may consider analog drilling or production data, rock and sand strength, formation age, variance in pore pressures, and other relevant geologic and engineering factors to support your determination.

16. Q. What reservoirs do you consider "producible"?

A. 30 CFR 250.116(b)(4) considers "A resistivity or induction electric log of the well showing a minimum of 15 feet (true vertical thickness except for horizontal wells) of producible sand in one section" as one method to qualify your well as capable of production. However, there are several reservoirs that currently produce from sands less than 15 feet (true vertical thickness except for horizontal wells). Thus, you must consider an analog reservoir that is capable of flowing liquid hydrocarbons and is exposed to the open hole.

17. Q. What specific data should I submit regarding the assumptions and calculations used to determine the volume (daily discharge rate) used in my Worst Case Discharge (WCD) scenario?

A. NTL No. 2010-N06 states that you must supply the assumptions and calculations used to determine the volume (daily discharge rate) of the proposed well in your plan or document that you expect will have the highest volume of liquid hydrocarbons. This information is used as part of your worst case discharge scenario for EPs, DPPs, and DOCDs and for the Worst Case Discharge scenario in your regional Oil Spill Response Plan. Provide the assumptions that you made (with analog data cited) concerning well design, reservoir and fluid characteristics, and pressure volume temperature (PVT) characteristics. Provide an explanation of the reasoning for the analogs used and all calculations employed to derive the WCD volume. You must provide any models you used in establishing the WCD volume, along with supporting calculations (input and output files).

The following is a general guide for data that should be submitted:

Wellbore:

- Well cross section showing casing program for the proposed well to include casing/liner sizes (outside and inside diameters) and setting depths. (MD and TVD).
- Various hole sizes as the well is being drilled and depths at MD and TVD
- Water depth at proposed well location
- Plat of proposed surface and bottom hole location
- Proposed directional survey

Geologic Information:

- Structure Maps for each potentially producible sand to be encountered
- Individual sand top and base
- Maximum drainage area (cite analog)
- Range of permeability (could use analog MDT mobility ratio values from pressure tests)
- Range of height of net hydrocarbon sand (cite analog)
- Reservoir drive mechanism (cite analog)
- Cross section depicting all anticipated hydrocarbons bearing zones
- Reprocessed post-lease Seismic Data used in EP, DPP, or DOCD or well site location

Reservoir Fluid (state the analog used):

- Reservoir initial pressure and temperature (cite analog)
- Oil Reservoir data at reservoir condition including bubble point pressure, Boi, Rsi, viscosity of oil and oil compressibility, API gravity and specific gas gravity (cite analog)
- Gas Reservoir data at reservoir conditions including Bgi, API gravity of condensate, specific gas gravity, gas compressibility (z) factor and yield (BBL/MMCF)
- (cite analog)

Nodal Analysis

- Provide a copy of the inputs and outputs files of the Nodal programs to include flowing bottomhole pressure at each change in the internal wellbore diameter and at the wellhead flange on the seafloor, and the production rate in barrels of oil per day at the wellhead flange on the seafloor.

18. Q. In my calculations and model runs can I assume the presence of restrictions in the wellbore that would reduce flow?

A. You should assume that the wellbore is free of drillpipe, logging tools, or other similar equipment. Unless you can provide geologic and/or engineering evidence that the reservoir sand will fracture and result in bridging, you should assume consolidated sand and thus a fully open hole. Geologic evidence may include verifiable formation rock properties. Engineering evidence may include sidetrack or bypass boreholes due to sand consolidation problems. Other acceptable evidence may include verifiable wellbore, geologic, reservoir fluid, or nodal analysis specific citations.

19. Q. Should I assume that the blowout preventer is attached to the wellhead and calculate flow through the BOP?

A. No. Assume that the BOP is not connected to the wellhead.

20. Q. How long will it take BOEM to verify the WCD volume calculations and assumptions?

A. Each WCD scenario is site specific. Development drilling requires more data to be reviewed than exploratory drilling. A robust response will allow a more efficient and timely verification of your WCD volume calculations and assumptions.

21. Q. I recently drilled a development well but the well data is not due to be sent to BOEM until later. Should I send the recent well data with the supplemental information?

A. If new well data contains important analog data that BOEM needs to evaluate your supplemental information, submit that well data with the supplemental information. BOEM will be unable to complete its evaluation of your supplemental information until you submit that well data.

22. Q. If I submit the recent well data with the supplemental information, do I have to submit the data again to the Technical Data Management Section?

A. The recent well data submitted with the supplemental information is a subset of the information and data sent to the Technical Data Management Section. You must submit the complete set of well data to the Technical Data Management Section.

23. Q. Will BOEM use the analog data that I submit with the supplemental information to verify the WCD scenario?

A. The BOEM will consider the submitted analog data as the basis for the assumptions and calculations that support your WCD volume calculations and assumptions. The BOEM has proprietary data that might not be available to you. If appropriate, BOEM will use that data as an analog.

24. Q. What information should I provide concerning my arrangements for drilling relief wells and the availability of a rig to drill a relief well?

A. If you submit supplemental information for a previously approved EP, DPP, or DOCD, identify (by name and current location) at least one drilling rig capable of drilling a relief well in the event you have a blowout. This rig must be capable of drilling in the water depth where your well is located and to the total depth of your well. Discuss rig package constraints and specify as accurately as possible the time it would take to contract the rig, move it onsite, and drill a relief well. Also, discuss the feasibility of drilling a relief well from a neighboring platform or an onshore location.

If you submit supplemental information for an EP, DPP, or DOCD not yet approved or for a new EP, DPP, or DOCD, identify at least one type of rig capable of drilling a relief well in the event you have a blowout. At the time you submit your APD to drill the well(s) approved in your EP, DPP, or DOCD, you will be required to identify at least one specific rig of this type by name and location and provide the information in the above paragraph.

25. Q. What recommended data submittal format would facilitate the verification of the assumptions, calculations and analogs I send the BOEM in support of my worst case discharge scenario?

A. BOEM recommends including a Summary Sheet with your data submittal that states the parameters you used to derive the worst case discharge scenario (Attachment A). The Summary Sheet is not sufficient by itself to support the WCD scenario but allows BOEM to easily identify critical factors in the verification of your assumptions, calculations and analogs. Including a structure map that identifies the SHL and BHL with the intersection point at the horizon is also helpful.

26. Q. What does the BOEM mean by “package of reservoirs exposed to an open borehole with the greatest discharge potential” will be considered the worst case discharge scenario?

A. The worst case discharge daily volume is calculated for the well being drilled, not necessarily the target objective. The target objective may, in fact, produce the maximum discharge; however BOEM identifies all potentially producible hydrocarbon sands (PPHS) exposed to the open wellbore *during* drilling to determine the package of reservoirs that will discharge the maximum daily volume. Each PPHS package that is exposed to the open wellbore during drilling should be accounted for. The Example Well Casing Program in Attachment A illustrates how BOEM determines maximum discharge. The maximum discharge may not be from the deepest PPHS “E” with 30 feet of gas or the combination of PPHS “D” and “E” with 50 feet of gas and low permeability. The maximum daily liquid hydrocarbon discharge may be from the thicker, high permeability PPHS “A”, “B”, and/or “C” oil reservoirs *during* drilling when those sands are exposed to the open wellbore.

ATTACHMENT A

SUMMARY SHEET

WORST CASE DISCHARGE (WCD) EXAMPLE DATA

GENERAL INFORMATION:

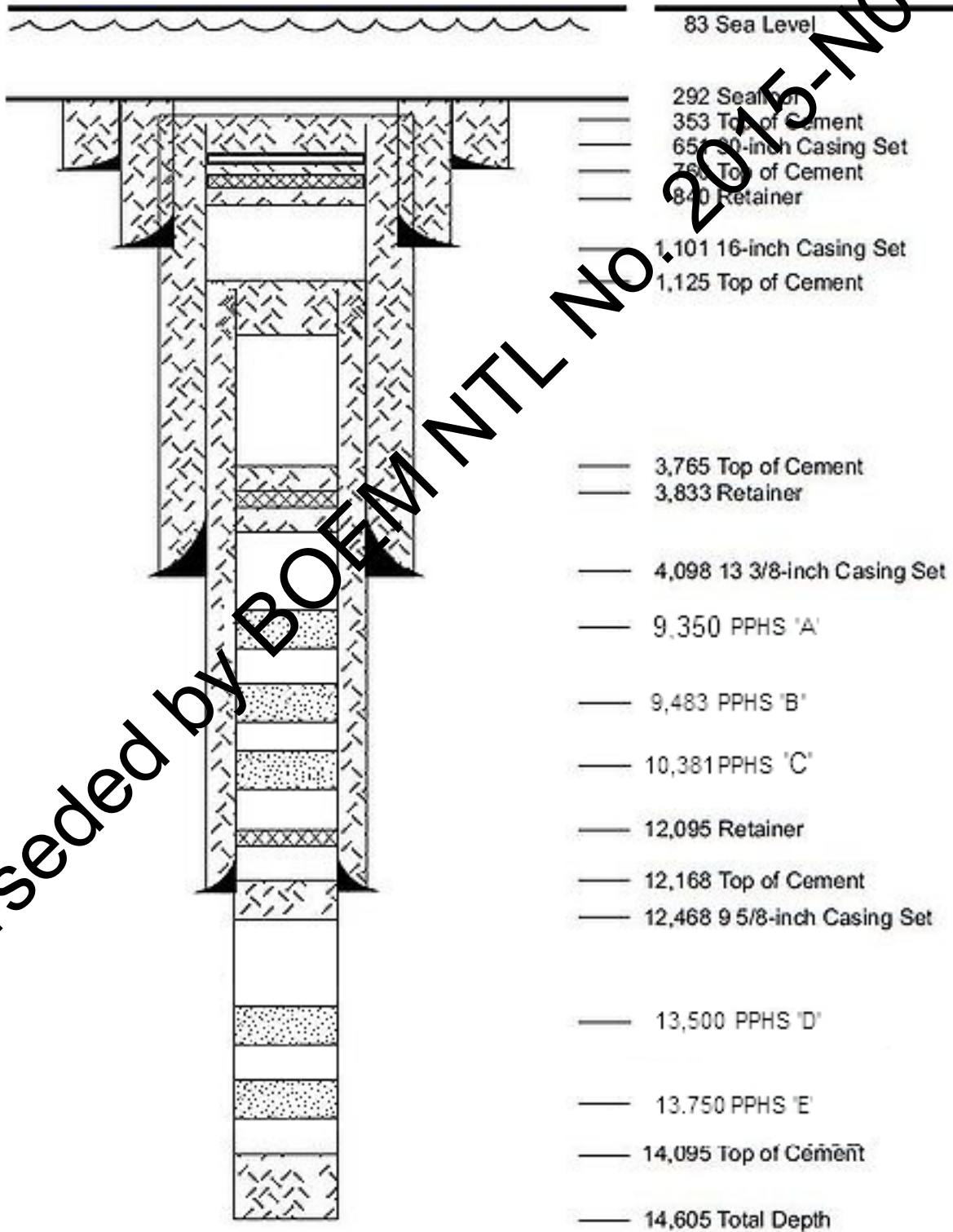
PLAN NUMBER	OCS AREA	OCS BLOCK	LEASE NUMBER

WELLBORE DATA:

Water depth at proposed well location (feet):						
CASING DATA						
INTERVAL NUMBER	HOLE SIZE	SIZE CASING	WEIGHT	GRADE	SETTING DEPTH	
					MD	TVD
DIRECTIONAL SURVEY DATA						
MD	INCLINATION	AZIMUTH	TVD	DELTA X	DELTA Y	

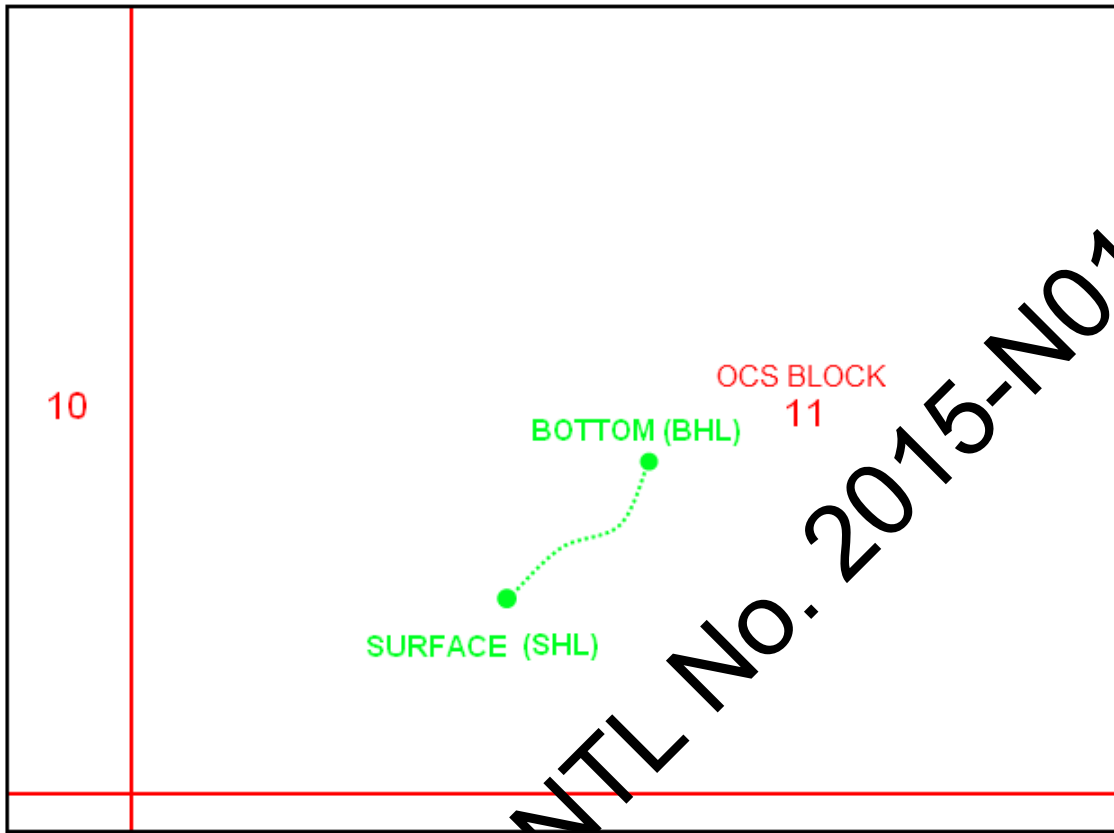
Superseded by BOEM NTL No. 2015-011 FAQs

EXAMPLE WELL CASING PROGRAM with Potential Producing Hydrocarbon Sand (PPHS) Identified

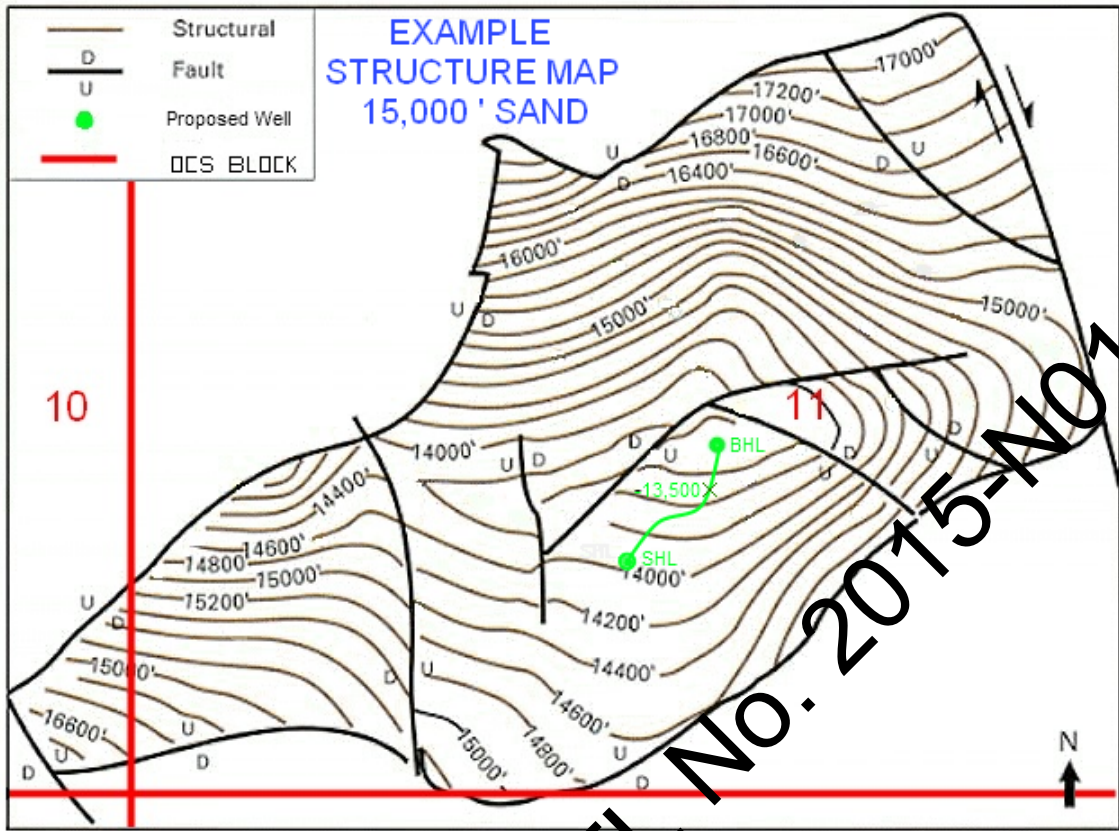


Superseded by BOEM NTL No. 2015-N01 FAQs

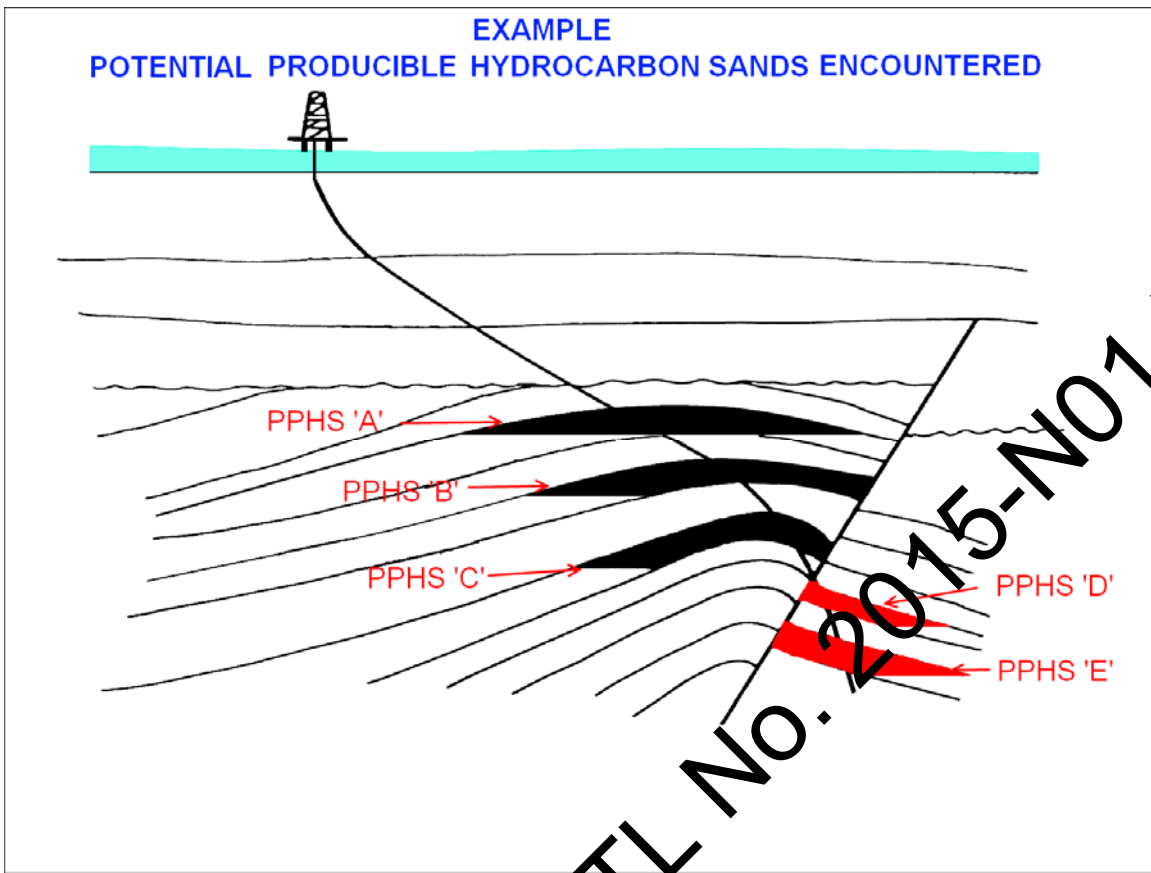
EXAMPLE WELL LOCATION PLAT



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GEOLOGIC DATA:

IDENTIFY OPEN HOLE INTERVAL USED IN WCD CALCULATION				TOP MD	BASE MD	
SAND NAME	TOP MD and TVD	BASE MD and TVD	HEIGHT (interface in wellbore)	SAND THICKNESS (tvt)	DRAINAGE AREA	USED IN WCD? (Y or N)

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RESERVOIR DATA:

SAND NAME		
CHARACTERISTIC	CHARACTERISTIC VALUE	ANALOG USED
INITIAL PRESSURE		
INITIAL TEMPERATURE		
PERMEABILITY		
DRAINAGE AREA		
MD THICKNESS OF SAND		
DRIVE MECHANISM		

FLUID DATA:

CHARACTERISTIC	CHARACTERISTIC VALUE	ANALOG USED
OIL DATA		
BUBLE POINT PRESSURE		
B _{oi}		
OIL VISCOSITY		
OIL COMPRESSIBILITY		
OIL API GRAVITY		
STATIC OIL FLUID GRADIENT		
R _{si}		
GAS SPECIFIC GRAVITY		
GAS DATA		
API GRAVITY OF CONDENSATE		
SPECIFIC GAS GRAVITY		
YIELD		
STATIC GAS FLUID GRADIENT		
D-TURBULENCE FLOW FACTOR		
GAS VISCOSITY		

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