
IPIMS

Navigation and Features Guide


e-Learning and Knowledge Solutions

v8.2023

IHRDC

IPIMS Log In Page

www.ipims.com



IPIMS

Welcome to IPIMS!


IPIMS is the award-winning, interactive multimedia and leading e-Learning system for building competencies in Upstream Petroleum Technology.

IPIMS includes over 1044 courses in 165 E&P topic areas and provides a comprehensive and flexible learning system that can be tailored to meet each individual's specific needs.

The courses are designed around two levels of learning: Background Learning and Action Learning. Each level includes extensive content, award-winning video, and challenging interactions and self-assessment questions.

Use the options below to search or browse the complete IPIMS Course Catalog. You can also download IHRDC's detailed 390+ page e-Learning Course Catalog PDF file.

Click the icons below for more information.

 IPIMS e-Learning Course Catalog HTML Document

 IHRDC Detailed e-Learning Course Catalog (PDF High 12.9 MB)

LOG IN **HELP**

Log In to IPIMS or [create a New Account](#).

User Name/Email

Your email or username

[Forgot your User Name?](#)

NEXT

Please enter a valid Email

Instructional Programs
2023 Schedule
IHRDC.com

IPIMS Portal Page

The screenshot shows the IPIMS portal interface. At the top left is the IPIMS logo, and at the top right is the IHRDC logo. A red box highlights the text "New IPIMS Portal page options below." in the top navigation area. Below the navigation bar, there is a welcome message for "Axel" and a search bar labeled "Search IPIMS Courses" with a "SEARCH" button. A callout box labeled "Search Options" points to the search bar and the filter tabs: PAGES, IMAGES, VIDEOS, and COURSES. Below the search bar, there are two main content blocks: "What is IPIMS Knowledge?" with a "BROWSE KNOWLEDGE" button, and "Select a Learning Plan" with a "COURSE CATALOG" button. A callout box labeled "Background Knowledge" points to the "What is IPIMS Knowledge?" section. Another callout box labeled "Background Learning and Action Learning" points to the "Select a Learning Plan" section. At the bottom, there is a "Recently Released Courses" section with several course thumbnails.

'Browse Knowledge' in IPIMS

The screenshot displays the IPIMS e-Learning Portal. At the top left, the text 'IPIMS' is visible. At the top right, the IHRDC logo is present. Below the header, a dark navigation bar contains a home icon, the text 'e-Learning Portal', a user profile icon, the email 'acurth@ihrdc.com', a help icon, and a 'Logout' button. The main content area features a welcome message: 'Axel, welcome to IHRDC's E&P e-Learning system called IPIMS (International Petroleum Industry Multimedia System). IPIMS is the leading exploration and production e-Learning resource. Developed in partnership with industry experts from major oil and gas companies, its content is rigorous and extensive, covering all areas of upstream technology.' Below this is a search bar with the placeholder 'Search IPIMS Courses' and a 'SEARCH' button. A filter bar below the search bar shows radio buttons for 'PAGES', 'IMAGES', 'VIDEOS', and 'COURSES', with 'COURSES' selected. To the right of the search bar are two expandable sections: 'What's New?' showing 'IPIMS topic releases in the last 12 months' and 'Learning in Progress' showing 'Courses started in the last 12 months'. Below these are two promotional cards. The first card, titled 'What is IPIMS Knowledge?', includes an image of an oil rig and text stating: 'IPIMS Knowledge is a vast searchable library of E&P knowledge assets, concepts and practices, including more than 4,754 subject pages, 1,463 videos, and 14,063 graphics.' It features a red 'BROWSE KNOWLEDGE' button. The second card, titled 'Select a Learning Plan', includes an image of hands typing and text: 'IPIMS courses include Background Learning, which are courses intended for an awareness level of competency and Action Learning intended for a basic application level of competency.' It features a 'COURSE CATALOG' button. At the bottom, a 'Recently Released Courses' section displays a row of five course thumbnails, including one labeled 'Permeability curve' and another labeled 'CMR'.

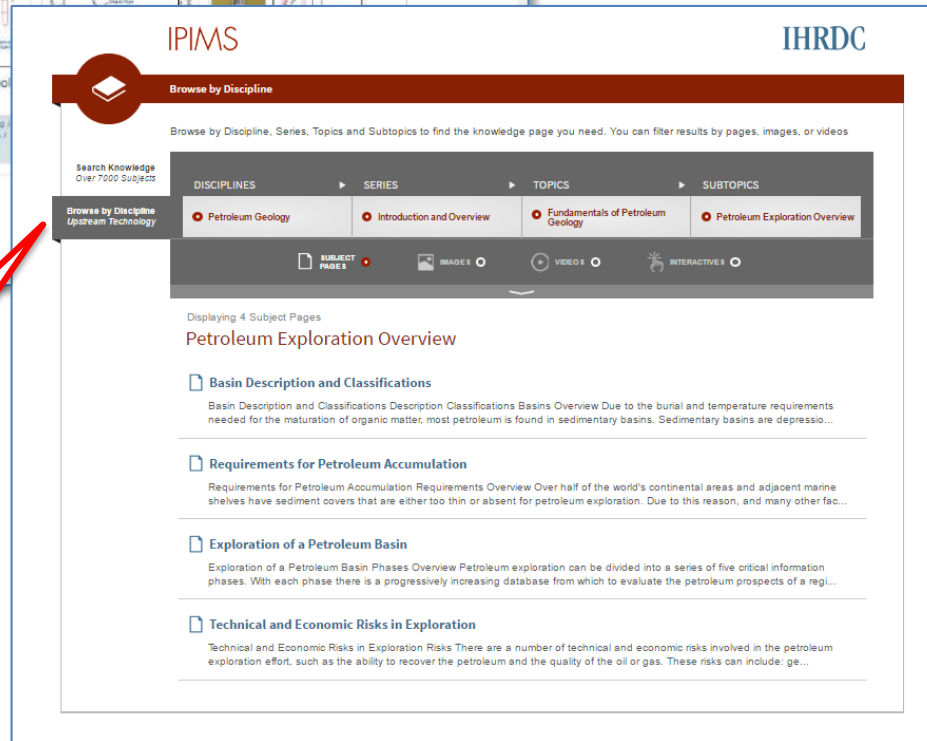
Background Knowledge

- Updated Search Engine functionality

IPIMS users can now 'Search Knowledge' pages using Keywords...



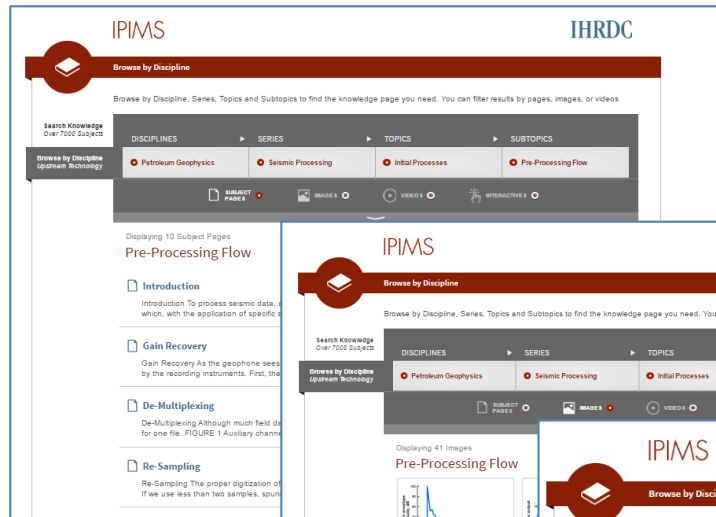
...and 'Browse by Discipline.'



'Browse By Discipline' Filter Views

- When **Browsing by Discipline**, filter by:

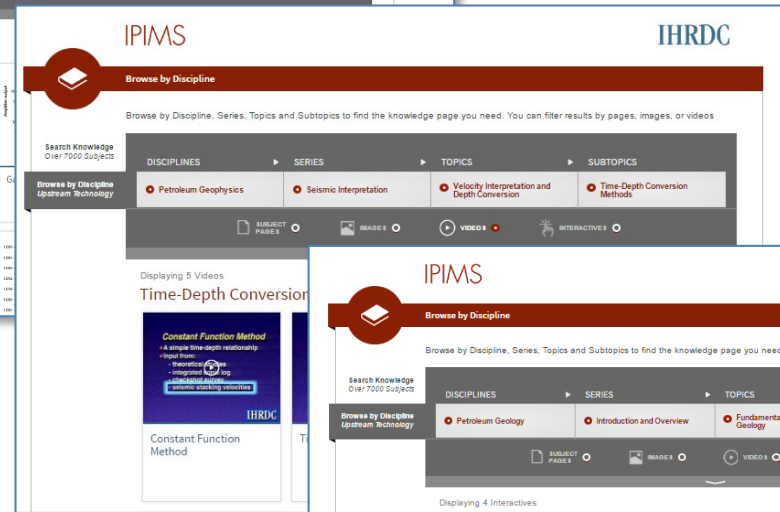
- Pages
- Images
- Videos
- Interactives



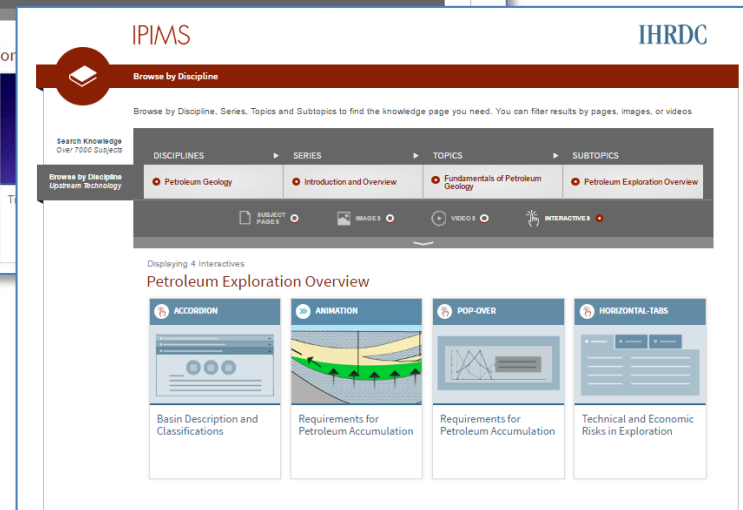
Subject Pages



Images



Videos



Interactives

'Browse by Discipline' Subject Listing View

Click here to access the left menu **Subject Listing** bar.

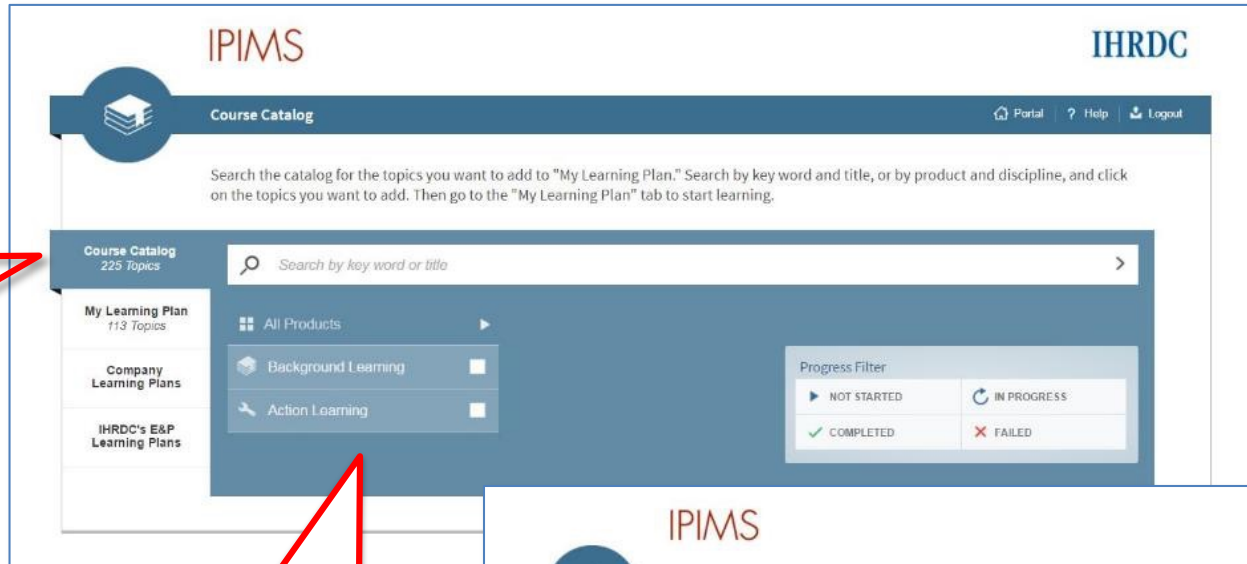
The left menu **Subject Listing** bar allows the User to easily navigate through multiple pages within a given **Subtopic**.

'Select a Learning Plan' in IPIMS

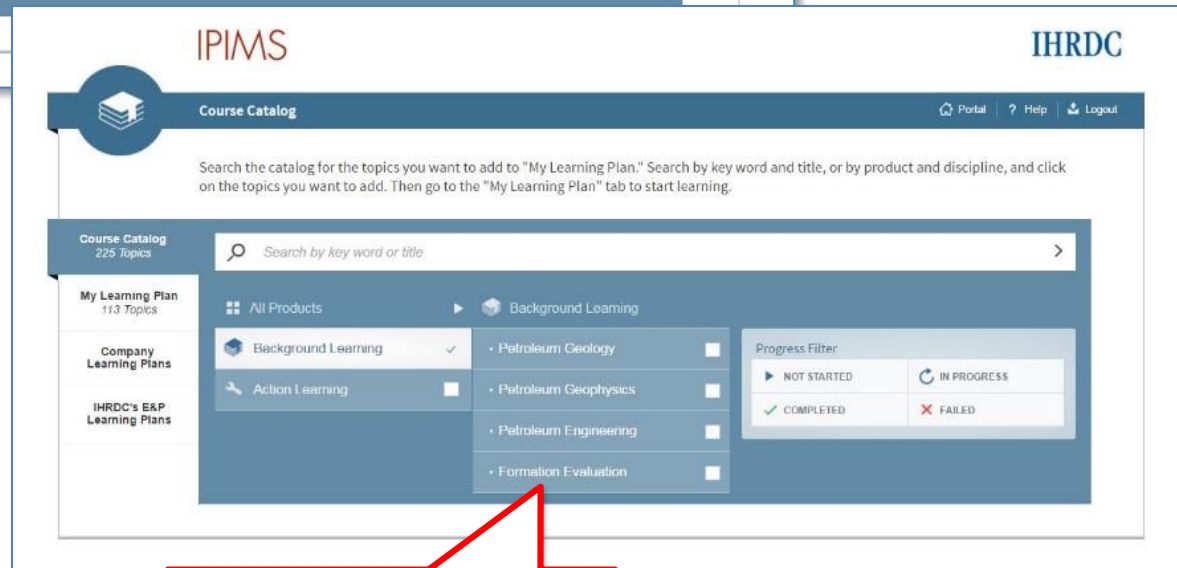
The screenshot displays the IPIMS e-Learning Portal. At the top left, the text 'IPIMS' is visible. At the top right, the IHRDC logo is present. Below these, a dark navigation bar contains a home icon, the text 'e-Learning Portal', the email 'acurth@ihrdc.com', a help icon, and a 'Logout' button. The main content area features a welcome message: 'Axel, welcome to IHRDC's E&P e-Learning system called IPIMS (International Petroleum Industry Multimedia System). IPIMS is the leading exploration and production e-Learning resource. Developed in partnership with industry experts from major oil and gas companies, its content is rigorous and extensive, covering all areas of upstream technology.' Below the message is a search bar with the placeholder 'Search IPIMS Courses' and a 'SEARCH' button. A filter bar below the search bar shows radio buttons for 'PAGES', 'IMAGES', 'VIDEOS', and 'COURSES', with 'COURSES' selected. To the right of the search bar are two expandable sections: 'What's New?' showing 'IPIMS topic releases in the last 12 months' and 'Learning in Progress' showing 'Courses started in the last 12 months'. Below the search bar are two promotional cards. The first card, titled 'What is IPIMS Knowledge?', includes an image of an oil rig and text describing the vast searchable library of E&P knowledge assets. The second card, titled 'Select a Learning Plan', includes an image of hands typing and text explaining that IPIMS courses include Background Learning and Action Learning. Below these cards is a section titled 'Recently Released Courses' with a row of five course thumbnails, including one labeled 'Permeability curve' and another labeled 'CMR'.

Learning Selection

Select your navigation choice.



Begin by making your Learning selection, either Background Learning and/or Action Learning.



Then, filter by Discipline.

Background Learning – Select a Topic

The screenshot displays the IPIMS Course Catalog interface. At the top, the IPIMS logo is on the left and the IHRDC logo is on the right. Below the logos, the text reads: "Search the catalog for the topics you want to add to 'My Learning Plan.' Search by key word and title, or by product and discipline, and click on the topics you want to add. Then go to the 'My Learning Plan' tab to start learning."

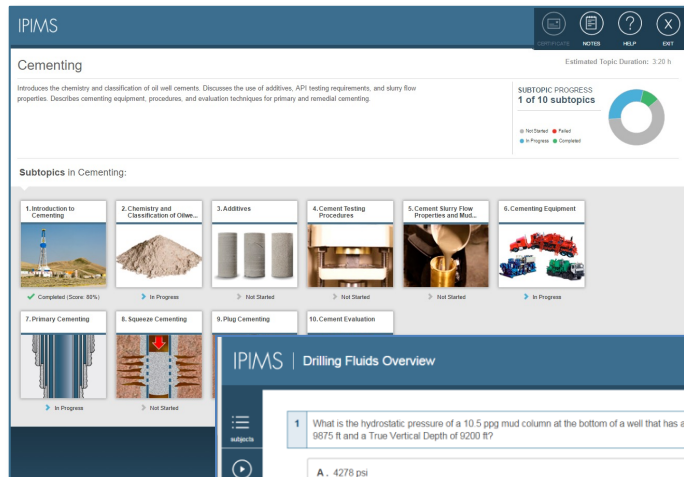
The interface includes a search bar with the placeholder text "Search by key word or title". Below the search bar, there are navigation tabs for "All Products" and "Background Learning". The "Background Learning" tab is selected, showing a list of topics: "Petroleum Geology", "Petroleum Geophysics", "Petroleum Engineering", and "Formation Evaluation". A "Progress Filter" section is also visible, with options for "NOT STARTED", "IN PROGRESS", "COMPLETED", and "FAILED".

Below the navigation tabs, the "Petroleum Geophysics (Background Learning Topics)" section is displayed. It features a grid of five topic cards, each with a thumbnail image and a title. The topics are: "Fundamentals of Exploration Geophysics", "Signal Theory", "Seismic Pulse", "Waveform to Geologic Model", and "Seismic Reflection". Each card has a "STATUS: Not Started" indicator and a "Selected" button.

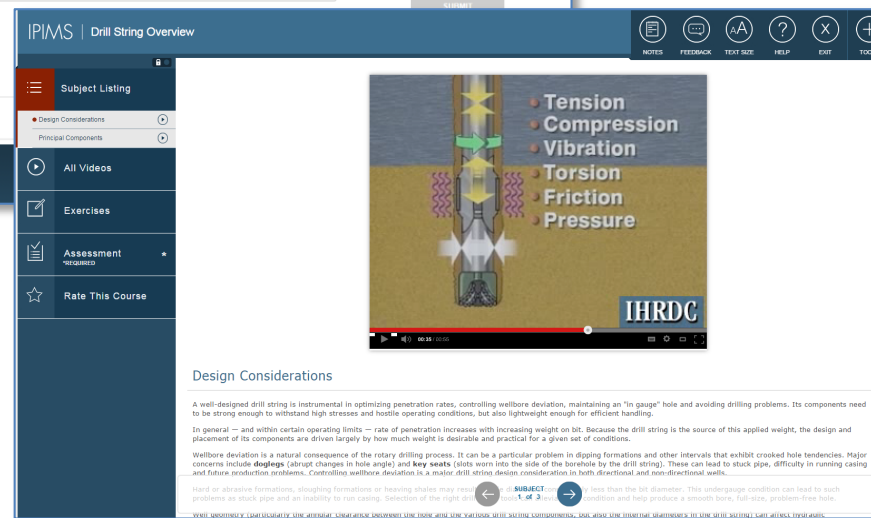
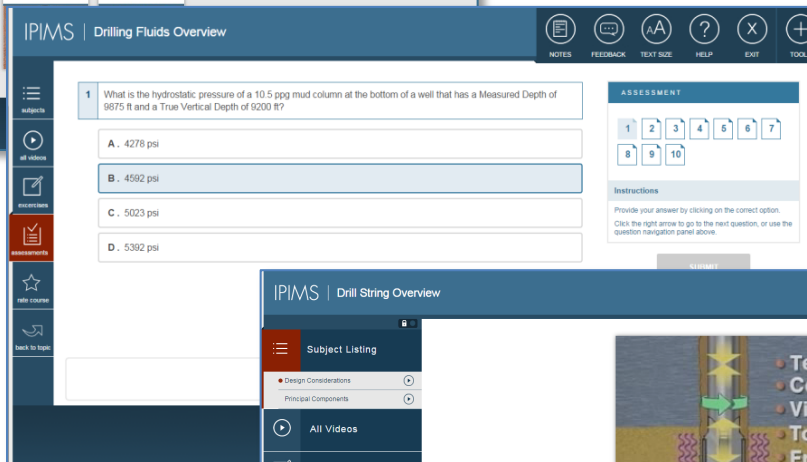
- **Background Learning's** new features employ interactive content elements within:
 - Subject pages
 - Knowledge Checks
 - Assessment Questions
- The new interactive content elements are designed to:
 - Engage the learner
 - Increase learning retention

Finally, select your **Topic** and begin your course!

Background Learning User Interface



- Instructionally designed to:
 - Increase learning retention
 - Provide a newer look and feel
- Tablet-friendly interface



Topic Level View in IPIMS Background Learning

IPIMS CERTIFICATE NOTES HELP EXIT

Cementing

Estimated Topic Duration: 3:20 h

Introduces the chemistry and classification of oil well cements. Discusses the use of additives, API testing requirements, and slurry flow properties. Describes cementing equipment, procedures, and evaluation techniques for primary and remedial cementing.

SUBTOPIC PROGRESS
1 of 10 subtopics

● Not Started ● Failed
● In Progress ● Completed

Subtopics in Cementing:

Subtopic	Image	Status
1. Introduction to Cementing		Completed (Score: 80%)
2. Chemistry and Classification of Oilwe...		In Progress
3. Additives		Not Started
4. Cement Testing Procedures		Not Started
5. Cement Slurry Flow Properties and Mud...		Not Started
6. Cementing Equipment		In Progress
7. Primary Cementing		In Progress
8. Squeeze Cementing		Not Started
9. Plug Cementing		Not Started
10. Cement Evaluation		Not Started

Clearer Navigation of Subtopics within a Topic.

IPIMS | IHRDC
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Helpful Tips & Tricks

See all the **notes** you have taken for the Subtopic within this Topic. Notes are saved at the Topic level.

Once you complete the Topic, you will be able to print a **Certificate of Completion**.

IPIIMS

Cementing Estimated Topic Duration: 3:40

Introduces the chemistry and classification of oil well cements. Discusses the use of additives, API testing requirements, and slurry flow properties. Describes cementing equipment, procedures, and evaluation techniques for primary and remedial cementing.

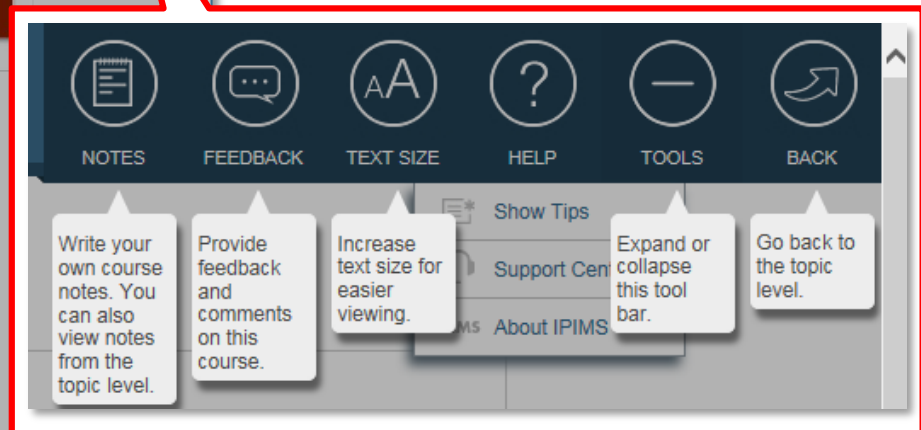
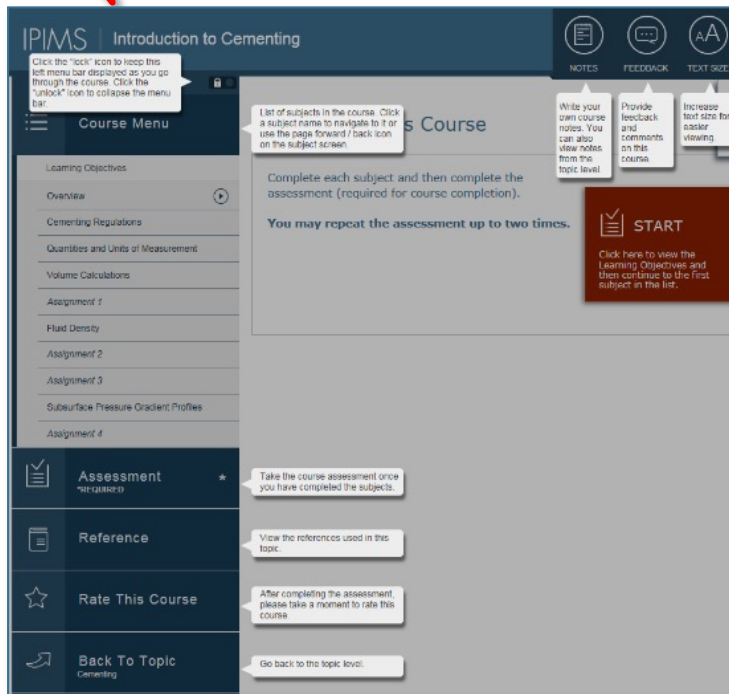
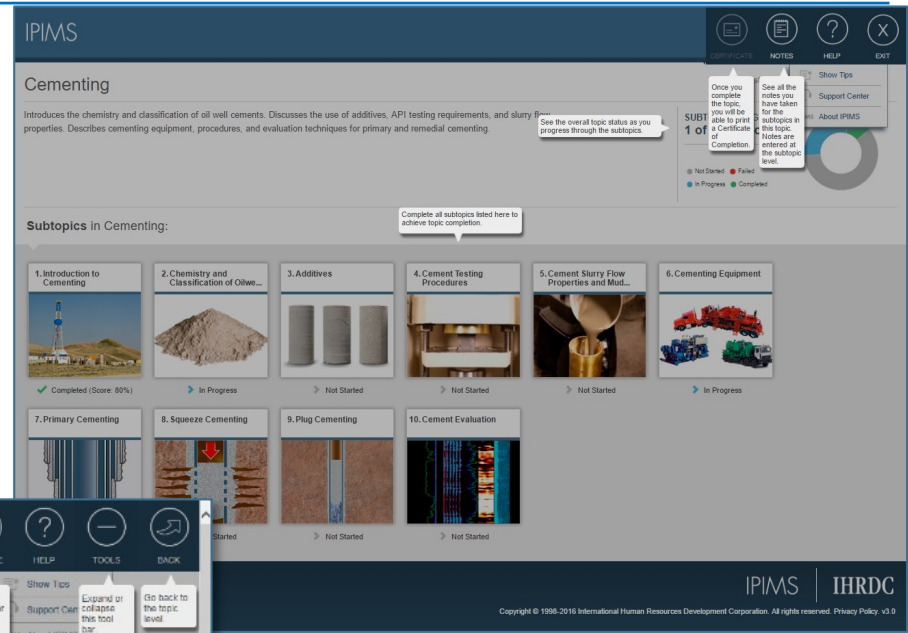
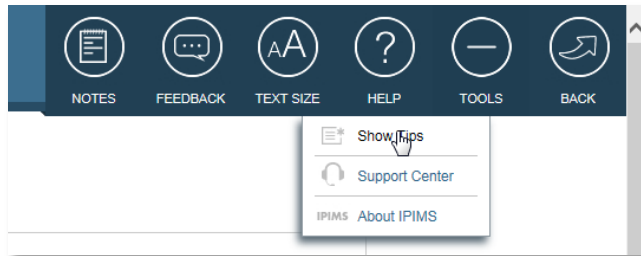
SUBTOPIC PROGRESS
1 of 10 subtopics

● Not Started ● Failed
● In Progress ● Completed

See the overall **Topic status** as you progress through the Subtopics.

Contextual Help

If you need help at any point, simply click on **Show Tips** within the **Help** options for convenient tips to guide you through a course.



Starting a Course

The screenshot displays the IPIMS Additives course interface. The top navigation bar includes 'IPIMS | Additives' and utility icons for Notes, Feedback, Text Size, Help, Tools, and Back. A left sidebar contains a 'Course Menu' with various categories like Learning Objectives, Introduction, Accelerators, Retarders, Extenders, Assignment, Weighting Materials, Dispersants, Fluid Loss Control Additives, Lost Circulation Prevention Additives, Strengthening Agents, Antifoam Agents, and Special Cement Systems. At the bottom of the sidebar are buttons for 'Assessment *REQUIRED', 'Reference', 'Rate This Course', and 'Back To Topic' (Cementing). The main content area is titled 'How to Use This Course' and contains instructions: 'Complete each subject and then complete the assessment (required for course completion). You may repeat the assessment up to two times.' A prominent red 'START' button is shown with a callout box that reads: 'Click the **Start** button to view Learning Objectives and then continue on to the first subject listing.'

Helpful In-Progress Resources

The screenshot shows the IPIMS interface for the course 'Introduction to Cementing'. A dark blue header bar contains the course title and a toolbar with icons for NOTES, FEEDBACK, TEXT SIZE, HELP, TOOLS, and BACK. A sidebar on the left shows a 'Course Menu' with options for Learning Objectives, Overview, and Cementing Regulations. The main content area is titled 'How to Use This Course' and includes instructions on assessment completion and a 'START' button. Red callout boxes with white text and red borders point to specific features: 'Provide feedback and comments on this course.' points to the FEEDBACK icon; 'Write your own course notes. You can also view notes from the topic level.' points to the NOTES icon; 'Increase text size for easier viewing.' points to the TEXT SIZE icon; 'Expand or collapse this tool bar.' points to the TOOLS icon; and 'Go back to the topic level.' points to the BACK icon.

Provide **feedback** and comments on this course.

Write your own course **notes**. You can also view notes from the topic level.

Increase **text size** for easier viewing.

Expand or collapse this **tool bar**.

Go back to the topic level.

In-Course Navigation

Click the **lock** icon to keep this left menu bar displayed as you go through the course. Click the **unlock** icon to collapse the menu bar.

List of **subjects** in the course. Click a subject name to navigate to it or use the page forward & back icons on the subject screen.

Take the **course assessment** once you have completed reading through the subjects.

View the **references** used in this Topic.

After completing the assessment, please take a moment to **rate this course**.

Go back to the Topic level.

The screenshot shows a mobile application interface for 'IHRDC | Introduction to Cementing'. At the top, there is a dark blue header with the course title. Below the header is a toggle switch for locking the menu. The main content area is divided into two columns. The left column is a vertical menu with the following items: Learning Objectives, Overview (with a play icon), Cementing Regulations, Quantities and Units of Measurement, Volume Calculations, Assignment 1, Fluid Density, Assignment 2, Assignment 3, Subsurface Pressure Gradient Profiles, and Assignment 4. The right column is titled 'How to Use' and contains a list of subjects: Assessment (with a checkmark icon and '*REQUIRED'), Reference (with a document icon), Rate This Course (with a star icon), and Back To Topic Cementing (with a back arrow icon). A lock icon is visible at the top of the menu bar.

Updated Video Player

IPIMS | Introduction to Cementing

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

Course Menu

Learning Objectives

- Overview
- Cementing Regulations
- Quantities and Units of Measurement
- Volume Calculations
- Assignment 1
- Fluid Density
- Assignment 2
- Assignment 3
- Subsurface Pressure Gradient Profiles
- Assignment 4

Assessment *REQUIRED

Reference

Rate This Course

Back To Topic
Cementing

Overview

Cementing is a critical step in the drilling and completion of oil and gas wells.

00:02 02:39

Cementing is a critical step in the drilling and completion of oil and gas wells.

Transcript

Cementing is a critical step in the drilling and completion of oil and gas wells.

If not performed correctly, you can spend a significant amount of time and money correcting the cement job or remediating the effects of a poor cement job.

Successful cementing is essential to safe and profitable oil and gas wells.

There are two basic categories of

Cementing is the process of pumping cement slurry to a predetermined depth in a wellbore.

The main reasons for primary cementing are to:

- Isolate subsurface formations from each other and thereby reduce the risk of crossflow.
- Anchor the casing by bonding it to the wellbore wall.

Additional benefits include:

- Protecting the casing from corrosion or erosion due to exposure to subsurface fluids
- Protecting the casing from external fluid pressure or formation stresses that could cause it to collapse
- Preventing blowouts during drilling
- Preventing shock loads to the casing during drilling

While primary cementing is the most widely used application, remedial cementing is also done to:

- Temporarily or permanently plug a well.
- Remedy an improperly performed previous primary cement job by squeezing cement into an unwanted void space behind the casing.

2 of 12

New video player available in **three different sizes** (shown here: small) with corresponding cc text and transcript.

Navigation bar: move forward and backwards within a course.

Updated Video Player

IPIMS | Introduction to Cementing

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

Course Menu

Learning Objectives

- Overview
- Cementing Regulations
- Quantities and Units of Measurement
- Volume Calculations
- Assignment 1
- Fluid Density
- Assignment 2
- Assignment 3
- Subsurface Pressure Gradient Profiles
- Assignment 4

Assessment *REQUIRED

Reference

Rate This Course

Back To Topic
Cementing

Overview

Cementing is a critical step in the drilling and completion of oil and gas wells.

Transcript

Cementing is a critical step in the drilling and completion of oil and gas wells. If not performed correctly, you can spend a significant amount of time and money correcting the cement job or remediating the effects of a poor cement job. Successful cementing is essential to safe and profitable oil and gas wells. There are two basic categories of cementing operations: primary cementing and remedial cementing.

2 of 12

Medium size video player, with the transcript below for better reading.

Full screen size video player.

Subject Page Interactives

Animation

IPIMS | Rock Properties and Seismic Velocity


Reference

Rate This Course

Back To Topic

To understand the importance of grain contact, consider a model of equally sized spheres in a cube (Animation 1).

Cubic packing of spheres and influence of shear wave
Animation 1



When a shear wave passes through the model, each sphere changes shape (but not volume). There is tension in the direction of wave propagation and compression in the direction perpendicular to the wave propagation.

The Effects of Grain Shape, Size, Distribution, and Orientation on Seismic Velocity

2 of 11

Popover Images

IPIMS | Slickline Operations

Memory Production Logging

Memory production logging services typically include the following battery-operated subsurface tools (Figure 3):

- Gamma ray and casing collar locator
- Pressure and temperature recording devices
- Spresse flow meter
- Fluid density and differential pressure devices
- Capacitance water foltup tools

Memory Production Logging Assembly

Have your cursor over or tap the hotspots.

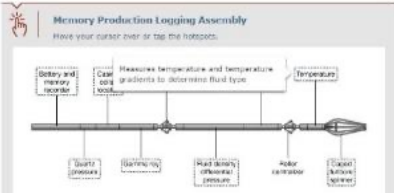


Figure 3: Typical memory production logging string (Holliburton, 2008)

The acquired subsurface data are retrieved when the tools are brought back to surface.

General Logging Procedure

5 of 11

Multi – Image Media Panel

IPIMS | Rock Properties and the Velocity-Density Relationship

Elastic Moduli and Poisson's Ratio

Click or tap left or right to slide more.

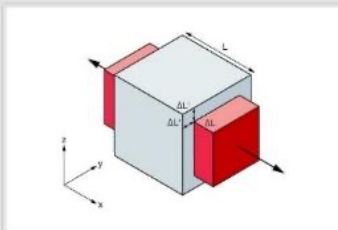


Figure 5: The Poisson effect

Poisson's ratio (ν) is a measure of the geometric change of shape under uniaxial stress, when a material is compressed in one direction, it usually tends to expand in the other two directions perpendicular to the direction of compression (Figure 5). This phenomenon is called the Poisson effect.

2 of 9

Knowledge Checks

The screenshot shows a user interface for a knowledge check. At the top, the header reads "IPIMS | Introduction to Cementing". A navigation bar contains icons for NOTES, FEEDBACK, TEXT SIZE, HELP, TOOLS, and BACK. The main content area displays a paragraph of text about regulations for drilling and cementing. Below this is a "Knowledge Check" section with a question: "Regulatory agencies have requirements that affect what aspects of a cementing operation? (Select all that apply.)". There are four checkboxes: "Cementing plan", "Interim and final reporting", "Drilling and cementing job logs", and "Resources estimation". Below the checkboxes are "RESET" and "SUBMIT" buttons. At the bottom, a navigation bar shows "3 of 12" with left and right arrows. A red callout box on the right explains that knowledge checks are optional questions at the end of each subject page. Another red callout box below it states that constructive feedback is provided for incorrect answers.

IPIMS | Introduction to Cementing

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

The regulations with respect to drilling and cementing of casing are extensive and must inform the drilling and completion plan. The plan, in turn, must be carefully followed during application or operators can risk major fines.

✓ Knowledge Check

Regulatory agencies have requirements that affect what aspects of a cementing operation? (Select all that apply.)

Cementing plan

Interim and final reporting

Drilling and cementing job logs

Resources estimation

Core analysis

RESET SUBMIT

3 of 12

Knowledge Checks are optional questions presented at the end of each **Subject page** and designed to reinforce key concepts and learnings in the content, through various question formats.

Constructive feedback is provided, re-enforcing a correct answer or explaining why an answer is incorrect.

Incorrect

Regulatory agencies have requirements for casing and cementing plans, interim and final reporting, as well as drilling and cementing job logs.

New Feature: Assignment and Draft Pad

Industry-specific scenario based
Assignment to apply Learning content.

IPIMS | Introduction to Cementing

Course Menu

Learning Objectives

Overview

Cementing Regulations

Quantities and Units of Measurement

Volume Calculations

- Assignment 1
- Assignment 2
- Assignment 3
- Assignment 4

Assessment *REQUIRED

Reference

Rate This Course

Back To Topic
Cementing

Assignment 1

Cement Slurry and Post-flush Fluid Volumes

Using the data provided, calculate the quantity of cement slurry and post-flush fluid required to cement the intermediate string of casing in the Assignment Well. Include a 25% cement contingency.

Summary Table						
Casing String	Hole Diameter D_{hole} (in)	Hole Depth* (feet)	Casing Shoe Depth* L (feet)	Depth to Float Collar* (feet)	Casing OD (in)	Casing ID (in)
Conductor [c]	30	40	$L_4 = 80$	N/A	20	19
Surface [s]	17.5	1510	$L_3 = 1505$	1465	13.375	12.615
Intermediate [i]	12.25	4015	4008	3968	9.625	8.835

* All depths measured from Rotary Kelly Busing (RKB)

20-in conductor set at 80 ft (30-in hole)

17.5-in hole drilled to 1505 ft. 13.375-in, 54.50 lb/ft casing (ID=12.615 in) set at 1505 ft.

9.625-in, 40 lb/ft casing (ID=8.835-in) to be set

6 of 12 collar

DRAFT PAD

You may use this area to write down your solution.

Draft Pad is available to write down your solution during Exercises or Assignments. Notes in the Draft Pad *are not saved* for later use.

Navigating Assessments

IPIMS | Introduction to Cementing

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

Course Menu

Assessment *REQUIRED

MONIK MONTANARI

10 Questions

INSTRUCTIONS:

- Answer each assessment question.
- After you have answered all questions, click the "Submit All" button.
- A passing score is 80%.
- You can attempt the assessment up to 3 times.

START ASSESSMENT

Reference

Rate This Course

Back To Topic

Assessment

9 Because the density of sedimentary rock is about 2.5 x that of water, the pressure gradient imposed by the weight of the overburden is estimated to be about _____ $\frac{\text{psi}}{\text{ft}}$ of depth.

A . 2

B . 1

C . 3

D . 4

ASSESSMENT

1 2 3 4 5

6 7 8 9 10

Instructions

Provide your answer by clicking on the correct option.

Click the right arrow to go to the next question, or use the question navigation panel above.

ASSESSMENT STATUS

QUESTION 9 of 10

SUBMIT ALL

Click the **Assessment Status** pop-up panel to seamlessly navigate through the assessment questions.

Highlighting makes it clear which questions remain unanswered.

Background Learning: Interactive Assessments

Multiple Choice

The screenshot shows an assessment interface for a multiple-choice question. The header reads "IPIMS | Correlating Seismic Data to Geologic Events". The question is: "1 What does the classic Exxon Model illustrate?". Below the question is a diagram of the Exxon Model, showing a cross-section of a sedimentary basin with labels for "Sediment Supply", "Climate", "Eustasy", "Unconformity", and "Subsidence". A legend identifies four sediment types: Coastal Belt Sands (yellow), Coastal Plain Sediments (green), Marine Fine-Grained Sediments (orange), and Alluvial Plain Sediments (blue). The question options are: A. Global fault zones, B. Aeolian processes, C. Sequence stratigraphy, and D. Exxon's gas play. The interface includes a sidebar with navigation options (subjects, assessment, references, into course, back to topic) and a top toolbar with icons for notes, feedback, text size, help, tools, and back.

Fill In the Blank

The screenshot shows an assessment interface for a fill-in-the-blank question. The header reads "IPIMS | Joints and Fractures". The question is: "8 With relation to permeability enhancement, for Pattern B, avenues for fluid communication tend to _____ the trend of the host structure." Below the question is a diagram showing two cross-sections of a rock formation with joints and fractures. The first section (A) shows vertical fractures, and the second section (B) shows fractures that are parallel to the bedding. The question options are: A. vertical, B. parallel, C. increase, and D. decrease. The interface includes a sidebar with navigation options (subjects, assessment, references, into course, back to topic) and a top toolbar with icons for notes, feedback, text size, help, tools, and back. A question navigation panel on the right shows a grid of question numbers (1-8) and instructions: "Provide your answer by clicking on the correct option. Click the right arrow to go to the next question, or use the question navigation panel above." The bottom of the interface shows "ASSESSMENT STATUS", "QUESTION 8 of 8", and a "SUBMIT ALL" button.

Assessment Questions, and their variety of formats, make for more engaging learning which improves the ability to assess the learner's knowledge of more complex content.

Course Completion

IPIMS | Introduction to Cementing

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

Course Menu

Assessment *REQUIRED

Status: Passed 100%

10 Questions

Number of attempts: 1
Date: 6/8/2015

INSTRUCTIONS:

- Answer each assessment question.
- After you have answered all questions, click the "Submit All" button.
- A passing score is 80%.
- You can attempt the assessment up to 3 times.

REVIEW ASSESSMENT

Reference

Rate This Course

Back To Topic
Cementing

Assessment Results

Congratulations!
You successfully completed the assessment for this course.

100%
Status: Passed

Review Assessment

Rate This Course

After completing the Assessment, you are able to **review** your Assessment answers or **rate the course**.

Rate This Course

Needs improvement Good Excellent

Thank you for rating this course. If you have any feedback on how we can improve this course, please complete our feedback form.

Go to Feedback Form

Course Completion

The screenshot shows the IPIMS interface for the 'Cementing' course. At the top left, the IPIMS logo is visible. The course title 'Cementing' is displayed prominently. Below the title, a brief description of the course content is provided. On the right side, there are navigation icons for 'CERTIFICATE', 'NOTES', 'HELP', and 'EXIT'. Below these icons, the 'Estimated Topic Duration' is listed as 3:20 h. A 'SUBTOPIC PROGRESS' section shows '1 of 10 subtopics' completed, accompanied by a donut chart. A legend indicates the status of subtopics: Not Started (grey), In Progress (blue), Failed (red), and Completed (green). Below the progress section, a list of subtopics is shown, each with a thumbnail image and a progress indicator. A red callout box highlights the progress indicators, stating 'Subtopic grades and progress are clearly marked'. The subtopics listed are: 1. Introduction to Cementing (Completed, Score: 80%), 2. Chemistry and Classification of Oilwe... (In Progress), 3. Additives (Not Started), 4. Cement Testing Procedures (Not Started), 5. Cement Slurry Flow Properties and Mud... (Not Started), 6. Cementing Equipment (In Progress), 7. Primary Cementing (In Progress), and 8. Cement Evaluation (Not Started). At the bottom right, the IPIMS and IHRDC logos are displayed, along with a copyright notice: 'Copyright © 1998-2016 International Human Resources Development Corporation. All rights reserved. Privacy Policy v3.0'.

IPIMS Action Learning 3.2

IPIMS Action Learning

IPIMS
IHRDC

Course Catalog

[Portal](#) | [Help](#) | [Logout](#)

Search the catalog for the topics you want to add to "My Learning Plan." Search by key word and title, or by product and discipline, and click on the topics you want to add. Then go to the "My Learning Plan" tab to start learning.

Course Catalog
226 Topics

My Learning Plan
53 Topics

Company Learning Plans

IHRDC's E&P Learning Plans

All Products
Action Learning


Background Learning	<input type="checkbox"/>	Exploration	<input type="checkbox"/>
Action Learning	<input checked="" type="checkbox"/>	Drilling and Well Completion	<input type="checkbox"/>
		Production Engineering and Operations	<input checked="" type="checkbox"/>
		Reservoir Management	<input type="checkbox"/>

Progress Filter

▶ NOT STARTED	↻ IN PROGRESS
✔ COMPLETED	✘ FAILED


Production Engineering and Operations (Action Learning Topics)

Production Fundamentals




Production Method

RATING: No rating available. ⓘ




Production Optimization

RATING: No rating available. ⓘ



Production Facilities

RATING: No rating available. ⓘ



Well Testing

RATING: No rating available. ⓘ

IPIMS Action Learning

IPIMS | ACTION LEARNING

CERTIFICATE PLAN FEEDBACK NOTES TEXTSIZE HELP EXIT

ABOUT THIS COURSE BACKGROUND KNOWLEDGE IMPORTANT INFORMATION START LEARNING!

Production Optimization

You are part of a team of E&P specialists responsible for evaluating a recent discovery in the Republic of Sucre. Your immediate objective is to determine formation properties and estimate hydrocarbon recovery potential, based on the limited information currently available. This will be the first step in developing a detailed reservoir model and, if justified, a long-term reservoir management plan.

Learning Objectives

After completing this course, you will be able to:

- Analyze well behavior, using nodal analysis and interpreting historical production trends.
- Diagnose equipment problems and/or detect production deviations.
- Identify production problems relating to pressure decline, water, gas or sand production, low productivity, formation damage or equipment failure.
- Recommend actions required for optimizing production, identify candidate wells for well servicing, stimulation and/or sand control and indicate the best method to use.

Competency Statement

Optimize the performance of individual producing wells.

PRODUCTION OPTIMIZATION
NOT STARTED

Access these tiles sequentially to advance through the **Production Optimization** course. Estimated Duration: 8h

PRE-ASSESSMENT
Not Started

Productivity Index and Flow Efficiency
1 ASSIGNMENT
Not Started

Stimulation Planning
2 ASSIGNMENT
Not Started

Well Performance Optimization, Part 1
3 ASSIGNMENT
Not Started

Well Performance Optimization, Part 2
4 ASSIGNMENT
Not Started

POST-ASSESSMENT
Not Started

IPIMS Action Learning

The screenshot shows the IPIMS Action Learning interface. At the top, there is a navigation bar with the text "IPIMS | ACTION LEARNING" and several icons: CERTIFICATE, PLAN, FEEDBACK, NOTES, TEXTSIZE, HELP, and EXIT. Below this is a progress bar with four steps: ABOUT THIS COURSE, BACKGROUND KNOWLEDGE, IMPORTANT INFORMATION, and START LEARNING!. The current step is "ABOUT THIS COURSE".

The main content area is titled "Production Optimization". It includes a description: "You are part of a team of E&P specialists responsible for evaluating a recent discovery in the Republic of Sucre. Your immediate objective is to determine formation properties and estimate hydrocarbon recovery potential, based on the limited information currently available. This will be the first step in developing a detailed reservoir model and, if justified, a long-term reservoir management plan."

Below the description are "Learning Objectives" and a "Competency Statement".

On the right side, there is a red callout box with the text "First time users" pointing to the "PRODUCTION OPTIMIZATION" tile. The tile shows a photo of a worker and the text "NOT STARTED".

At the bottom, there is a section titled "Access these tiles sequentially to advance through the Production Optimization course." with an estimated duration of 8h. This section contains a row of six tiles: PRE-ASSESSMENT, Productivity Index and Flow Efficiency (1 ASSIGNMENT), Stimulation Planning (2 ASSIGNMENT), Well Performance Optimization, Part 1 (3 ASSIGNMENT), Well Performance Optimization, Part 2 (4 ASSIGNMENT), and POST-ASSESSMENT. All tiles are marked as "Not Started".

IPIMS Action Learning

The screenshot displays the IPIMS interface for 'Productivity Index and Flow Efficiency'. The top navigation bar includes icons for NOTES, FEEDBACK, TEXTSIZE, HELP, TOOLS, and BACK. A left sidebar contains navigation options: Assignment, Assignment Instruction, Productivity Index and Flow Efficiency, Assessment (marked as *REQUIRED), Next Subtopic, and Back (Production Optimization). The main content area is titled 'How to Use This Course' and lists three steps: 1. Read through the Assignment Instructions (highlighted with a red callout box containing the text 'Resources always available'); 2. Complete the assessment (required for completion). You may repeat the assessment up to two times.; 3. At any point during the course, you can access related IPIMS material by clicking on the BACKGROUND button on the top right of the screen. Below this, it states: Action Learning REFERENCES are an essential resource — there you will find the field data and other information needed to complete the Assignment. At the bottom center, there is a prominent 'START' button with a power icon and the text 'Click here to go to the General Assignment Instructions.' On the right side, a vertical 'RESOURCES' menu is visible, with 'BACKGROUND KNOWLEDGE' and 'REFERENCES & FIELD DATA' options.

IPIMS Action Learning: Resources

The screenshot displays the IPIMS application interface. On the left is a sidebar with a 'Background Knowledge' section containing a list of topics such as 'Production Systems Overview', 'Reservoir Inflow Performance: Fluid Flow and Permeability', and 'Inflow Performance Relationship'. The main content area is titled 'Production System Overview' and 'Elements of the Production System'. It features a video player showing a cross-section of a well with labels for 'Wellhead/Choke', 'Separator', 'Reservoir', and 'Wellbore'. Below the video is a paragraph of text explaining the components of a petroleum production system. At the bottom of the video player, there are navigation controls including a 'SUBJECT 1 of 183' indicator and a 'Detach' button. The top right of the interface includes utility icons for 'FEEDBACK', 'TEXT SIZE', 'UNIT', 'HELP', and 'TOOLS'.

Improved views of references and background knowledge

IPIMS Action Learning: References

IPIMS

Background Knowledge

References & Field Data

- Flow Equations
- Well Summary
- Well Test Results

Flow Equations

Equations for Flow of Undersaturated Oil

- Steady state, radial flow:

$$p_e - p_{wf} = \frac{141.2 q B \mu}{k h} \left(\ln \frac{r_e}{r_w} + s \right)$$

Applications: Constant pressure at outer drainage boundary (e.g., pressure maintenance by an aquifer).
- Semi steady state, radial flow:

$$\bar{p} - p_{wf} = \frac{141.2 q B \mu}{k h} \left(\ln \frac{0.472 r_e}{r_w} + s \right)$$

Applications: Non-constant pressure at outer drainage boundary (e.g., fault, pinchout, or production from adjoining wells).
- Semi steady state, irregular flow boundary:

$$p_{avg} - p_{wf} = \frac{141.2 q B \mu}{k h} \left(\frac{1}{2} \ln \frac{4A}{\gamma C_A r_w^2} + s \right)$$

Applications: Irregular drainage shape, or asymmetrical positioning of well within drainage area.

Units and Nomenclature:

A = drainage area, square ft
 B = formation volume factor
 C_A = shape factor
 k = permeability, md
 p_{avg} = average reservoir pressure in drainage area, psia
 p_e = pressure at outer drainage boundary, psia

REFERENCE 1 of 3

IPIMS Action Learning

The screenshot displays the IPIMS Action Learning interface. At the top, the header reads "IPIMS | ACTION LEARNING" and includes navigation icons for CERTIFICATE, PLAN, FEEDBACK, NOTES, TEXTSIZE, HELP, and EXIT. Below the header, a progress bar shows the current stage: "ABOUT THIS COURSE" (highlighted), followed by "BACKGROUND KNOWLEDGE", "IMPORTANT INFORMATION", and "START LEARNING!".

The main content area is titled "Production Optimization". It contains a paragraph of introductory text, a "Learning Objectives" section with a list of bullet points, and a "Competency Statement" section. A red box highlights the text "Updated module progress view" overlaid on the right side of the content area.

On the right side of the content area, there is a "PRODUCTION OPTIMIZATION" module card. The card features a thumbnail image of a worker, the text "IN PROGRESS 2 of 6 subtopics", and a progress bar. An information icon (i) is located in the top right corner of the card.

Below the main content area, a red arrow points to a row of six tiles representing the course structure. The tiles are: "PRE-ASSESSMENT" (Completed, Score: 84%), "Productivity Index and Flow Efficiency" (1 ASSIGNMENT, Completed, Score: 100%), "Stimulation Planning" (2 ASSIGNMENT, Not Started), "Well Performance Optimization, Part 1" (3 ASSIGNMENT, Not Started), "Well Performance Optimization, Part 2" (4 ASSIGNMENT, Not Started), and "POST-ASSESSMENT" (Not Started). The estimated duration for the course is 8h.

IPIMS Action Learning: Assignment

The screenshot displays the IPIMS Stimulation Planning interface. At the top, the header reads "IPIMS | Stimulation Planning". A navigation bar on the right contains icons for NOTES, FEEDBACK, TEXTSIZE, HELP, TOOLS, and BACK. The left sidebar shows a menu with "Assignment" (selected), "Assessment *REQUIRED", "Next Subtopic", and "Back Production Optimization". The main content area is titled "Assignment Instruction" and contains two paragraphs of text. The first paragraph states: "In this Learning Module, you will review the actual performance of Well 5A1-SW, as well as that of several other wells in offsetting fields, in an effort to optimize their production rates. By the time you complete this module, you should be able to analyze well behavior using nodal analysis and historical production trends, diagnose equipment problems and/or detect production deviations, and recommend the appropriate action for optimizing production." The second paragraph states: "Well 5A1-SW has been completed in the Upper/Middle sands, and a production and buildup tests have been completed. You now need to see if the well's actual performance matches what was predicted before its completion. You will be looking for ways to optimize this well's production under both current and future reservoir conditions. You will also look at other wells, including two that are currently producing using electric submersible pumps and one that is planned as a rod pump completion, and make recommendations regarding their performance." A "RESOURCES" sidebar on the right lists "BACKGROUND KNOWLEDGE" and "REFERENCES & FIELD DATA". At the bottom of the content area, a navigation bar shows "1 of 3" with left and right arrows. The footer of the interface includes "IPIMS | IHRDC".

IPIMS Action Learning: Assessment

IPIMS | Stimulation Planning

NOTES FEEDBACK TEXTSIZE HELP TOOLS BACK

Assignment

Assessment *REQUIRED

MARY HOLLAND

4 Questions

INSTRUCTIONS:

- Answer each assessment question.
- After you have answered all questions, click the "Submit All" button.
- A passing score is 75%.
- You can attempt the assessment up to 2 time(s).

START ASSESSMENT

Next Subtopic

Back
Production Optimization

Assessment

1 What type of acid do you recommend using for the main treatment?

A . 28 percent hydrochloric acid

B . Standard mixture of 12 percent hydrochloric (HCl) and 3 percent hydrofluoric (HF) acid

C . Mixture of hydrochloric (HCl) and hydrofluoric (HF) acid, concentration to be determined by laboratory analysis of core material.

D . Mixture of 15 percent HCl and 3 percent acetic acid

New assessment engine

ASSESSMENT STATUS

QUESTION 1 of 4

SUBMIT ALL

RESOURCES

BACKGROUND KNOWLEDGE

REFERENCES & FIELD DATA

Action Learning: Detailed Status

The screenshot displays the IPIMS Action Learning interface. A modal window titled "Production Optimization" is open, showing the following details:

- Pre-Assessment:** Score of 84% (8/10/2023). Note: The pre-assessment score does not count towards the final score.
- Assignment:** 60% of the final score comes from an average of all assignments.
 - 1. Productivity Index and Flow Efficiency: 100% (8/10/2023)
 - 2. Stimulation Planning: Not taken
 - 3. Well Performance Optimization, Part 1: Not taken
 - 4. Well Performance Optimization, Part 2: Not taken
- Post-Assessment:** The remaining 40% of the final score comes from the post-assessment. Status: Not taken.
- Certificate of Completion:** Will be enabled upon completion of all assignments and a post-assessment score of 80% or higher.
- Course Rating:** 5 stars (Needs improvement, Good, Excellent).
- Topic Progress:** Donut chart showing 100% completed (green), 0% in progress (blue), 0% failed (red), and 0% not started (grey).

The background interface shows a progress bar for "PRODUCTION OPTIMIZATION" (100% progress of 6 subtopics) and an estimated duration of 8 hours. A bottom navigation bar shows the status of each assessment stage: PRE-ASSESSMENT (Completed, Score: 84%), ASSIGNMENT 1 (Completed, Score: 100%), ASSIGNMENT 2 (Not Started), ASSIGNMENT 3 (Not Started), ASSIGNMENT 4 (Not Started), and POST-ASSESSMENT (Not Started).

Action Learning: Complete Entire Course

The screenshot displays the IPIMS Action Learning interface. At the top, the header reads "IPIMS | ACTION LEARNING" and includes navigation icons for CERTIFICATE, PLAN, FEEDBACK, NOTES, TEXTSIZE, HELP, and EXIT. Below the header, a progress bar shows the current stage: "ABOUT THIS COURSE" (highlighted), followed by "BACKGROUND KNOWLEDGE", "IMPORTANT INFORMATION", and "START LEARNING!".

The main content area is titled "Production Optimization". It includes a paragraph: "You are part of a team of E&P specialists responsible for evaluating a recent discovery in the Republic of Sucre. Your immediate objective is to determine formation properties and estimate hydrocarbon recovery potential, based on the limited information currently available. This will be the first step in developing a detailed reservoir model and, if justified, a long-term reservoir management plan."

Learning Objectives
After completing this course, you will be able to:

- Analyze well behavior, using nodal analysis and interpreting historical production trends.
- Diagnose equipment problems and/or detect production deviations.
- Identify production problems relating to pressure decline, water, gas or sand production, low productivity, formation damage or equipment failure.
- Recommend actions required for optimizing production, identify candidate wells for well servicing, stimulation and/or sand control and indicate the best method to use.

Competency Statement
Optimize the performance of individual producing wells.

On the right side, a "PRODUCTION OPTIMIZATION" tile shows a "Topic Score" of 97% and a right-pointing arrow.

Below the main content, a red arrow points to the text: "Access these tiles sequentially to advance through the **Production Optimization** course." The estimated duration is 8h.

The progress bar at the bottom shows the following completion status:

Module	Completion Status	Score
PRE-ASSESSMENT	Completed	84%
1 ASSIGNMENT (Productivity Index and Flow Efficiency)	Completed	100%
2 ASSIGNMENT (Stimulation Planning)	Completed	100%
3 ASSIGNMENT (Well Performance Optimization, Part 1)	Completed	100%
4 ASSIGNMENT (Well Performance Optimization, Part 2)	Completed	89%
POST-ASSESSMENT	Completed	96%

Action Learning: Detailed Score Results

The screenshot displays the IPIMS Action Learning interface. At the top, the navigation bar includes 'IPIMS | ACTION LEARNING' and icons for 'CERTIFICATE', 'PLAN', 'FEEDBACK', 'NOTES', 'TEXTSIZE', 'HELP', and 'EXIT'. Below this, a menu bar shows 'ABOUT THIS COURSE', 'BACKGROUND KNOWLEDGE', 'IMPORTANT INFORMATION', and 'START LEARNING!'. The main content area is titled 'Production Optimization' and features a 'Pre-Assessment' section with a score of 84% (8/10/2023), an 'Assignment' section with four tasks (100%, 100%, 100%, 89%), and a 'Post-Assessment' section with a score of 96% (8/10/2023). A 'Certificate of Completion' section states that the certificate will be enabled upon completion of all assignments and the post-assessment with an average score of 80% or higher. A 'Course Rating' section shows a 5-star rating with the text 'Needs improvement', 'Good', and 'Excellent'. A 'Topic Progress' section shows a donut chart with a legend for 'Not Started', 'Failed', 'In Progress', and 'Completed'. The background shows a 'Production Optimization' tile with a score of 97% and an 'Estimated Duration: 8h'. At the bottom, a progress bar shows the completion status of each assessment stage: PRE-ASSESSMENT (84%), ASSIGNMENT 1 (100%), ASSIGNMENT 2 (100%), ASSIGNMENT 3 (100%), ASSIGNMENT 4 (89%), and POST-ASSESSMENT (96%).

Action Learning: Certificate of Completion

The screenshot displays the IPIMS Action Learning interface. At the top, a dark blue navigation bar contains the text 'IPIMS | ACTION LEARNING' and a series of icons: CERTIFICATE (highlighted with a red box and arrow), PLAN, FEEDBACK, NOTES, TEXTSIZE, HELP, and EXIT. Below the navigation bar, a large white certificate is centered. The certificate features the IHRDC logo (www.ihrdc.com) and the IPIMS logo. The text on the certificate reads: 'Awards this Certificate to IPIMS Administrator For successful completion of the e-Learning program in Initial Well Planning Issued on: Monday, May 6, 2013'. It includes a signature of David A.T. Donohue, Ph.D., JD, President of IHRDC, and a QR code. Below the certificate, a progress bar shows six stages: PRE-ASSESSMENT (84%), 1 ASSIGNMENT (100%), 2 ASSIGNMENT (100%), 3 ASSIGNMENT (100%), 4 ASSIGNMENT (89%), and POST-ASSESSMENT (96%). To the right of the certificate, a small window shows a 97% score and an estimated duration of 8h.

Additional Examples

Subject Pages: Interactive Examples

Horizontal Tabbed Content

The screenshot shows the IPIMS interface for 'Rock Properties and Seismic Velocity'. At the top, there is a navigation bar with icons for Home, Feedback, Text Size, Help, Tools, and Back. Below this, the main content area is titled 'The Effects of Grain Shape, Size, Depth, Cementation, Overpressure and Clay Content on Shear Velocity'. A horizontal tabbed menu is visible with tabs for 'Grain Shape', 'Grain Size', 'Depth', 'Cement', 'Overpressure', and 'Clay'. The 'Grain Shape' tab is currently selected, displaying text about the effects of grain shape on shear velocity and an animation of a grain being sheared.

Vertical Tabbed Content

The screenshot shows the IPIMS interface for 'Waveform Theory'. The navigation bar is consistent with the previous example. The main content area is titled 'Interference and Amplitudes'. A vertical tabbed menu on the left side lists 'Example 1', 'Example 2', 'Example 3', and 'Example 4'. The 'Example 1' tab is selected, showing a diagram of two waves in phase and a resulting wave with double amplitude.

Accordion Tabbed Content

The screenshot shows the IPIMS interface for 'Folds'. The navigation bar is consistent. The main content area is titled 'Multi-layered Mechanisms'. An accordion-style tabbed menu is visible with sections for 'Flexural Slip', 'Shear Folding', and 'Kink Folding'. The 'Flexural Slip' section is expanded, showing text about flexural slip and a diagram illustrating the mechanism. Below the diagram, there are sections for 'Flattening and Shortening' and '5 of 9'.

Subject Pages: Interactive Examples

Drag Image & Zoom

IPIMS | Sedimentary Basins

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

Regional Seal

A third play requirement is a regional seal which will confine the petroleum in the reservoir. The ideal regional seal has a fine-grained, ductile lithology, with sufficient lateral distribution to cover the reservoir. The seal thus keeps the hydrocarbons in the carrier beds, and prevents them from leaking from the trap. One example of a good regional seal is marine shales transgressing over gently sloping sandstone reservoirs on a continental shelf. Another example is widespread evaporites overlying shallow-marine carbonate rocks such as reefs (Figure 5).

Example of a Regional Seal

Enlarge and drag the image to see more.

Vertical scale

Non-reef well 5740 ft (1750 m) test of section

3000 ft (2743 m)

A9-102 A12-502 A20

FORMATION

Vertical exaggeration = 1x2.5

Sealing evaporites Argillaceous
Shale and marl Limestone

Figure 5: Geologic well cross-section, Sirte Basin, Libya showing regional seal (evaporites)

3 of 8

Knowledge Checks: Interactive Examples

Drag & Drop and Fill In the Blank

IPIMS | Slickline Operations

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

✓ Knowledge Check

Drag the characteristic to match the corresponding type of pressure survey.

	Flowing Gradient Survey	Static Gradient Survey
Gas lift is injecting	Run under producing conditions	Run on a shut-in well
Ten minutes per stop is typical		Gas lift injection is stopped
Five minutes per stop is typical		

RESET SUBMIT

For memory production logging, run in the hole at a maximum speed of ft/min, slow down to ft/min to pass through gas lift mandrels.

RESET SUBMIT

← 5 of 11 →

Multiple Choice and Image Hotspot Identifier

IPIMS | Petroleum Exploration Overview

NOTES FEEDBACK TEXT SIZE HELP TOOLS BACK

✓ Knowledge Check

What fraction of 1 percent marine shale organic matter will be converted to hydrocarbon molecules?

1/3

< 1/3

< 1/8

1/2

RESET SUBMIT

Drag the parameter to match with the correlating area on the image.

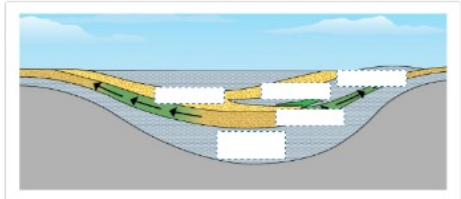
Mature source rock

Migration

Reservoir

Seal

Trap



RESET SUBMIT

← 3 of 7 →

Assessments: Interactive Examples

Matching Drag & Drop

The screenshot shows an assessment interface for 'Migration and Accumulation Processes'. The question asks to drag stratigraphic trap types to match their correlating sections. On the left, there are four buttons: 'Unconformity', 'Uplift pinchout', 'Diagenetic', and 'Channelling'. On the right, there are four geological diagrams showing different stratigraphic sequences. The interface includes a course menu on the left, a 'START A BESSMENT' button, and navigation controls at the bottom.

Multiple Select

The screenshot shows an assessment interface for 'Structural Styles: Tectonic'. The question asks for categories that basement involved extensional provinces can be divided into. The options are: A. Rift Grabens, B. Passive continental margins, C. Active continental margins, and D. Fold and thrust belts. The interface includes a course menu on the left, a 'START A BESSMENT' button, and navigation controls at the bottom.