

16
1984

UNIVERSIDAD DE BUENOS AIRES

FACULTAD DE CIENCIAS EXACTAS Y NATURALES

DEPARTAMENTO: CIENCIAS GEOLOGICAS
ASIGNATURA: ANALISIS DE CUENCAS SEDIMENTARIAS
CARRERA/S: LICENCIATURA Y/O DOCTORADO EN CIENCIAS GEOLOGICAS

-----ORIENTACION-----


-----PLAN-----

CARACTER: OPTATIVA
DURACION DE LA MATERIA: CUATRIMESTRAL
HORAS DE CLASES: a) Teóricas 60 Hs. b) Problemas 128 Hs.
c) Laboratorio Hs. d) Seminarios-- c)Totales 188 hs

ASIGNATURAS CORRELATIVAS: GEOLOGIA HISTORICA Y REGIONAL

P R O G R A M A

- Tema 1.- Clasificación de las Cuencas Sedimentarias desde el punto de vista geotectónico, Generalidades. Relación entre la actividad tectónica y la naturaleza y forma de las cuencas sedimentarias. Vinculación con sus depósitos. Teorías de los geo sinclinales y de la Tectónica de Placas, Evolución de las cuencas sedimentarias, Movimientos horizontales y verticales; megaestructuras; tipos de cuencas; atributos favorables para para la acumulación de yacimientos económicos. Emplazamiento de los yacimientos gigantes. Ejemplos.
- Tema 2.- Ambientes deposicionales, Su importancia estratigráfica. Factores que constituyen un ambiente. Ambientes complejos. Relación entre distintos ambientes. Clasificación de los mismos. Continentales, transicionales y marinos. Diversos tipos.
- Tema 3.- Factores a considerar para la reconstrucción de los paleoambientes, Litologías, asociaciones litológicas, estructuras primarias y datos paleoecológicos. Estructuras sedimentarias, estructuras de corrientes, estructuras de origen biológico, químico y mecánico. Medición e interpretación de cada una de ellas. Ejemplos argentinos.
- Tema 4.- Diferentes ambientes deposicionales.
- Tema 4.1.- Facies eólicas, Generalidades, Dunas, Tipos de dunas: litorales, de ríos y de desierto. Formas de las dunas: transversales, longitudinales y complejas. Estructuras diagnósticas de dunas: capas frontales, superficies de truncamiento, marcas ondulantes eólicas. Distribución de los tamaños de grano y su clasificación. Criterios para el reconocimiento de sedimentitas eólicas. Ejemplos argentinos.
- Tema 4.2.- Facies de abanicos, Generalidades, A) Facies continentales: ambientes y ciclos deposicionales; espesor, texturas y estructuras sedimentarias. Geometría de los depósitos. Criterios para el reconocimiento de los abanicos continentales. Ejemplos argentinos.
B) Facies submarinas; turbiditas, su origen, Modelo de facies de una turbidita. Variaciones verticales y laterales. Estructuras sedimentarias. Régimen del flujo. Criterios para el reconocimiento de turbiditas Ejemplos argentinos.


DR. CARLOS A. RINALDI
SUB - DIRECTOR A/C
DEPTO. CIENCIAS GEOLOGICAS

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4.3.- Facies de planicies fluviales: Generalidades. Aspectos morfológicos de los ríos: meandrosos, anastomosados. Otras particularidades morfológicas. Análisis de la planicie de inundación y sus sedimentos: depósitos de canal y de la llanura. Concepto del régimen de flujo. Criterios para el reconocimiento de los depósitos de planicie fluvial. Ejemplos argentinos.

4.4.- Facies deltaicas: Generalidades. Diferentes tipos de deltas. Constructivos, Destructivos. Ambiente deltaico y sus subfacies: subfacies de la planicie deltaica, subfacies frontales y subfacies de fondo (prodelta). Complejo deltaico del Mississippi: su historia geológica; ambiente y subfacies diferenciadas en el mismo. Complejo deltaico del Ródano: evolución del complejo; subfacies que lo integran. Ejemplos de delta fósiles y delta actuales. Criterios para el reconocimiento de sedimentos deltaicos. Ejemplos argentinos.

4.5.- Facies de marea: Generalidades. Facies de planicie de marea y de los canales. Estructuras sedimentarias. Sistema de corrientes y análisis de paleocorrientes. Facies de marea del Mar de Wadden (Holanda). Facies de marea en la costa Nueva Inglaterra (USA). Criterios para el reconocimiento de facies de marea. Ejemplos argentinos.

4.6.- Facies de playa: Generalidades. Estructuras sedimentarias Texturas, estructuras y distribución granulométrica. Arenas de playa de la Costa de California. Criterios para el reconocimiento de arenas de playa. Ejemplos argentinos.

4.7.- A) Facies litorales: Generalidades. Tipos de arenas litorales. Barreras. Cordones litorales regresivos. Asociaciones litorales. Sedimentos transgresivos. Geometría de los depósitos. Arenas marinas. Costa noroeste del Golfo de México. Criterios para la diagnosis de facies litorales. Ejemplos argentinos.

4.7.- B) Sedimentos de aguas someras: Tempestitas. Generalidades. Depósitos de tormentas en ambientes carbonáticos y silicoclásticos actuales. Depósitos antiguos: litologías más frecuentes. Texturas y estructuras sedimentarias. Subfacies y geometría de los cuerpos. Asociación con otras facies. Ejemplos.

4.8.- Facies lagunares: Generalidades. Identificación de las subfacies. Asociaciones litológicas y estructuras sedimentarias en cada una de ellas. Facies lagunares en Piceance Creek Basin (Colorado-U.S.A.). Criterios para la diagnosis de facies lagunares. Ejemplos argentinos.

4.9.- Facies carbonáticas. Generalidades. Facies carbonáticas continentales, de transición y marinas. Asociaciones litológicas, estructuras sedimentarias y caracteres bioestratigráficos. Influencia de la fauna y la flora en la depositación carbonática. Porosidad y Diagénesis. Estadios diagenéticos. Asociación con evaporitas. Abultamientos carbonáticos. Depósitos de plata formas, taludes, rampas y cuencas profundas, Turbiditas carbonáticas. Análisis de ejemplos mundiales y argentinos.

Tema: 5.- Sismoestratigrafía y el análisis estratigráfico. Concepto de sistemas deposicionales y la estratigrafía genética. Sísmica de reflexión. Significado geológico de las reflexiones y de las terminaciones de los horizontes reflectores. Facies sísmicas. Mapeo de facies sísmicas. Esquemas progradantes, transgresivos y regresivos. Limitaciones de los métodos sísmicos en la interpretación estratigráfica. Cambios globales del nivel del mar. Significado geológico e interpretación evolutiva de las cuencas sedimentarias desde el punto de vista del concepto anterior. Reconocimiento de distintos ambientes deposicionales. Ejemplos mundiales y argentinos.

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Tema 4.2

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Fecha..... 28/10/83

Firma Profesor..... G. Chebli

Aclaración firma: Dr. GUALTER A, CHEBLI

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DR. CARLOS A. RINALDI
SUB-DIRECTOR A/C
DEPTO. CIENCIAS GEOLOGICAS