



Planning, implementing and managing E&P projects

MFFAT730003

Szénhidrogén-kutató földtudományi mérnöki mesterszak

2020/21 I. félév

TANTÁRGYI KOMMUNIKÁCIÓS DOSSZIÉ

**Miskolci Egyetem
Műszaki Földtudományi Kar
Ásványtani-Földtani Intézet**

Course Title: Planning, implementing and managing E&P projects	Credits: 2
Type (lec. / sem. / lab. / consult.) and Number of Contact Hours per Week: lec. 1, sem. 1	
Neptun code: MFFAT730005	
Type of Assessment (exam. / pr. mark. / other): pr. mark	
Grading limits: >80%: excellent, 70-80%: good, 60-70%: medium, 50-60%: satisfactory, <50%: unsatisfactory..	
Position in Curriculum (which semester): third	
Pre-requisites (<i>if any</i>): Core analysis.	
Course Description:	
Acquired store of learning: <u>Study goals:</u> During the semester students get global overview about value creation for the stakeholders and its processes of the hydrocarbon exploration and production activity. Students to learn the best practices and standards of the exploration and production projects planning, execution and monitoring. Get students practice the basis of the modern project management. <u>Course content:</u> The players of the global oil and gas industry. The hydrocarbon exploration and production value chain. Strategy, developing oil and gas projects. Access and lease exploration and production rights. Planning and controlling upstream projects. Legal framework, PSA, JOA, JV. Fiscal regimes, oil and gas projects economics. Risk management, managing technical, political and partner risks. Product management, sales contracts. Resources and reserves disclosure and reporting. <u>Education method:</u> Lectures, powerpoint projected slides. Microsoft Office programs are used during the practice. Competencies to evolve: T1, T2, T3, T5, T6, T10, T11, T12, K1, K2, K3, K4, K6, K7, K8, K9, K11, A2, A3, A4, A7, A8, F1, F2, F3	
The 3-5 most important compulsory, or recommended literature (textbook, book) resources:	
<ul style="list-style-type: none"> • The Global Oil & Gas Industry; Management, Strategy and Finance Andrew Inkpen / Michael H. Moffett. • Quick Allen N. (1986): Exploration planning and analysis of exploration risk for the Hungarian National Oil and Gas Trust (course textbook) • Daniel Ph., Keen M., McPherson Ch. (2011): The taxation of petroleum and Minerals: Principles, problems and practice. Routledge • Allen & Overy (2013): Guide to extractive industries documents – Oil & Gas. World Bank • Speed Ph. E. (2000): Mineral and petroleum taxation. University of Dundee Distance learning courses 	
Responsible Instructor (<i>name, position, scientific degree</i>): Ferenc Mádai Dr., associate professor, PhD	
Other Faculty Member(s) Involved in Teaching , if any (<i>name, position, scientific degree</i>): Attila Holoda (Aurora Resources Kft.)	

Féléves órabeosztás

2020/21 1. félév

Holoda Attila óráit tömbösítve, 3 órás blokkokban tartjuk a következő menetrend szerint

dátum	időtartam	foglalkozás témája	oktató
2020.09.10	11 - 13	Mining law introduction	Mádai Ferenc
2020.09.17	11 – 13	INTRAW scenario individual work	Mádai Ferenc
2020.09.24	11 – 13	international conventions	Mádai Ferenc
2020.10.01	11 – 13	Caspian Sea issue individual analysis	Mádai Ferenc
2020.10.08	11 – 13	concession and PSC regimes	
2020.10.15	11 – 13	individual analysis of a concession tender	
2020.10.22	11 – 13	Taxation principles and models	
2020.10.29	11 – 13	Fiscal system of petroleum projects	
2020.11.05	11 – 13	analysis of the home country fiscal system	
2020.11.19	9-12 AM	The players of the global oil and gas industry. The hydrocarbon exploration and production value chain.	Holoda Attila
2020.11.19	1-4 PM	Strategy, developing oil and gas projects, Planning and controlling upstream projects	Holoda Attila
2020.11.26	9-12 AM	Risk management, managing technical, political and partner risks.	Holoda Attila
2020.11.26	1-4 PM	Product management, sales contracts	Holoda Attila

A tárgyhoz kapcsolódó előadás anyagok, tananyagok és a szükséges háttér információ (cikk sablon stb.) letölthető a tantárgy Moodle oldaláról:

Moodle: <http://edu.uni-miskolc.hu/edu/> Műszaki Földtudományi Kar ⇨ Ásványtani-Földtani Intézet
⇨ MFFAT730003

Félévközi beadandó feladatok:

- Find the evidence how the principle of the Security of tenure is incorporated in the national mining law of your home country
 - határdő: október 22.
- Analysis of the PSC rules of your home country (background materials: Allen @ Overy guideline, Ernst&Young Global oil and tax guideline, PSC model contracts)
 - határidő: november 19.
- Analysis of petroleum taxation models using excel sheet (CIT model, CIT+royalty model, RRT model, PSC model)
 - határidő: november 19.

Modell adótáblák

year	explor	investm	product	product	unit price	CIT model					governr
						income	depreci	pre-tax	CIT	after-tax	
1	-50.0										
2	-1.5										
3	-12.7										
4	-13.5										
5		-46.2								-123.9	
6		-146.3								-146.3	
7		-76.4	11.8	8.2	8.0	65.6	43.3	10.5	5.2	-27.8	5.2
8			11.8	16.4	8.0	131.2	43.3	76.1	38.0	81.4	38.0
9			11.8	16.4	8.0	131.2	43.3	76.1	38.0	81.4	38.0
10			11.8	16.4	8.0	131.2	43.3	76.1	38.0	81.4	38.0
11			11.8	16.4	8.0	131.2	43.3	76.1	38.0	81.4	38.0
12			11.8	14.8	8.0	118.4	26.0	80.6	40.3	66.3	40.3
13			11.8	13.3	8.0	106.4	26.0	68.6	34.3	60.3	34.3
14			11.8	12.0	8.0	96.0	26.0	58.2	29.1	55.1	29.1
15			11.8	10.8	8.0	86.4	26.0	48.6	24.3	50.3	24.3
16			11.8	9.7	8.0	77.6	26.0	39.8	19.9	45.9	19.9
17			11.8	8.7	8.0	69.6		57.8	28.9	28.9	28.9
18			11.8	7.9	8.0	63.2		51.4	25.7	25.7	25.7
19			11.8	7.1	8.0	56.8		45.0	22.5	22.5	22.5
20			11.8	6.4	8.0	51.2		39.4	19.7	19.7	19.7
net total						1316.0				402.1	402.1
NPV (10%)										74.1	216.3
company IRR										15.1%	

concession, Johnson												
year	explor	investm	product	product	unit price	income	royalty	depreci	tax base	CIT (30	compan	governr
1	-50.0											
2	-1.5											
3	-12.7											
4	-13.5											
5		-46.2										-123.9
6		-146.3										-146.3
7		-76.4	11.8	8.2	8.0	65.6	13.1	43.3	-2.6	0.0	-35.7	13.1
8			11.8	16.4	8.0	131.2	26.2	43.3	49.8	24.9	68.2	51.2
9			11.8	16.4	8.0	131.2	26.2	43.3	49.8	24.9	68.2	51.2
10			11.8	16.4	8.0	131.2	26.2	43.3	49.8	24.9	68.2	51.2
11			11.8	16.4	8.0	131.2	26.2	43.3	49.8	24.9	68.2	51.2
12			11.8	14.8	8.0	118.4	23.7	26.0	56.9	28.5	54.5	52.1
13			11.8	13.3	8.0	106.4	21.3	26.0	47.3	23.7	49.7	44.9
14			11.8	12.0	8.0	96.0	19.2	26.0	39.0	19.5	45.5	38.7
15			11.8	10.8	8.0	86.4	17.3	26.0	31.3	15.7	41.7	32.9
16			11.8	9.7	8.0	77.6	15.5	26.0	24.3	12.1	38.1	27.7
17			11.8	8.7	8.0	69.6	13.9		43.9	21.9	21.9	35.9
18			11.8	7.9	8.0	63.2	12.6		38.8	19.4	19.4	32.0
19			11.8	7.1	8.0	56.8	11.4		33.6	16.8	16.8	28.2
20			11.8	6.4	8.0	51.2	10.2		29.2	14.6	14.6	24.8
nettó összes						1316.0					269.2	535.0
NPV (10%)											11.6	292.0
vállalati IRR											10.8%	

production sharing															
year	explor	investm	product	product	unit price	income	royalty	cost ref	profit oil	profit oil	profit oil	compar	profit oil	profit oil	govern
1	-50.0														
2	-1.5														
3	-12.7														
4	-13.5														
5		-46.2										-123.9			
6		-146.3										-146.3			
7		-76.4	11.8	8.2	8.0	65.6	6.6	26.2	32.8	13.1	5.2	-42.3	19.7	5.2	31.5
8			11.8	16.4	8.0	131.2	13.1	52.5	65.6	26.2	10.5	68.2	39.4	10.5	63.0
9			11.8	16.4	8.0	131.2	13.1	52.5	65.6	26.2	10.5	68.2	39.4	10.5	63.0
10			11.8	16.4	8.0	131.2	13.1	52.5	65.6	26.2	10.5	68.2	39.4	10.5	63.0
11			11.8	16.4	8.0	131.2	13.1	52.5	65.6	26.2	10.5	68.2	39.4	10.5	63.0
12			11.8	14.8	8.0	118.4	11.8	47.4	59.2	23.7	9.5	61.6	35.5	9.5	56.8
13			11.8	13.3	8.0	106.4	10.6	42.6	53.2	21.3	8.5	55.3	31.9	8.5	51.1
14			11.8	12.0	8.0	96.0	9.6	38.4	48.0	19.2	7.7	49.9	28.8	7.7	46.1
15			11.8	10.8	8.0	86.4	8.6	34.6	43.2	17.3	6.9	44.9	25.9	6.9	41.5
16			11.8	9.7	8.0	77.6	7.8	31.0	38.8	15.5	6.2	40.4	23.3	6.2	37.2
17			11.8	8.7	8.0	69.6	7.0	27.8	34.8	13.9	5.6	36.2	20.9	5.6	33.4
18			11.8	7.9	8.0	63.2	6.3	25.3	31.6	12.6	5.1	32.9	19.0	5.1	30.3
19			11.8	7.1	8.0	56.8	5.7	16.8	34.3	13.7	5.5	25.0	20.6	5.5	31.8
20			11.8	6.4	8.0	51.2	5.1	11.8	34.3	13.7	5.5	20.0	20.6	5.5	31.2
nettó						1316.0						326.6			642.8
NPV (10%)												26.7			360.6
vállalati IRR												11.8%			

RRT															
year	explor	investm	product	product	unit price	income	compar	accumu	RRT (5	compar	government take				
1	-50.0														
2	-1.5														
3	-12.7														
4	-13.5														
5		-46.2					-123.9	-123.9	0.0	-123.9					
6		-146.3					-146.3	-285.1	0.0	-146.3					
7		-76.4	11.8	8.2	8.0	65.6	-22.6	-341.9	0.0	-22.6	0.0				
8			11.8	16.4	8.0	131.2	119.4	-263.5	0.0	119.4	0.0				
9			11.8	16.4	8.0	131.2	119.4	-175.7	0.0	119.4	0.0				
10			11.8	16.4	8.0	131.2	119.4	-77.4	0.0	119.4	0.0				
11			11.8	16.4	8.0	131.2	119.4	32.7	16.4	103.0	16.4				
12			11.8	14.8	8.0	118.4	106.6		53.3	53.3	53.3				
13			11.8	13.3	8.0	106.4	94.6		47.3	47.3	47.3				
14			11.8	12.0	8.0	96.0	84.2		42.1	42.1	42.1				
15			11.8	10.8	8.0	86.4	74.6		37.3	37.3	37.3				
16			11.8	9.7	8.0	77.6	65.8		32.9	32.9	32.9				
17			11.8	8.7	8.0	69.6	57.8		28.9	28.9	28.9				
18			11.8	7.9	8.0	63.2	51.4		25.7	25.7	25.7				
19			11.8	7.1	8.0	56.8	45.0		22.5	22.5	22.5				
20			11.8	6.4	8.0	51.2	39.4		19.7	19.7	19.7				
nettó összes						1316.0				478.1	326.1				
NPV (10%)										135.0	142.7				
vállalati IRR										20.1%					