Preface		xi	
Preface List of Abbreviations Acknowledgements CHAPTER 1 General Introduction 1. Introduction 2. Scope of the Book CHAPTER 2			
Acknow	vledgements	XV	
CHAPTE	r 1		
Genera	l Introduction	1	
1.	Introduction	1	
2.	Scope of the Book	11	
CHAPTE	R 2		
Analyti	cal Framework (The Nature of Property Right)	15	
1.	Introduction	15	
2.	First 'Pillar': Conceptual Meaning of Property	16	
	2.1 Legal Perspectives	16	
	2.2 Meaning of 'Property' in Property Law	17	
	2.3 Categories of Property	18	
	2.3.1 Public Property	19	
	2.3.2 Private Property	19	
	2.3.3 Common Property	19	
3.	Theoretical Meaning of Property Rights	20	
	3.1 Property as a 'Thing'	20	
	3.2 Property as a 'Bundle of Rights'	22	
	3.2.1 Aggregate Version	22	
	3.2.2 Disaggregate Version	24	
	3.2.3 Bundle of Rights Version	26	
4.	Exclusivity and Excludability Criteria of Property	27	
5.	Economic Perspective	29	

	5.1	Property as a 'List of Circumscribed Use Rights' (Bundle					
		of Rights)	29				
	5.2	Property as 'Entitlements'	31				
6.	Conc	ept of Property under Investment Laws	33				
7.	Conc	ept of Property under Human Right Laws	40				
	7.1	What Constitutes Property Rights under ECHR?	43				
		7.1.1 Licences	44				
	7.2	The Nature of State's Responsibility in Property Rights					
		Protection	46				
	7.3	7.3 Applicability and Enforcement of Property Right under the ECHR					
		7.3.1 Horizontal Effects of Convention Rights at the					
		International Level	49				
		7.3.2 Horizontal Effects of Convention Rights at the National					
		Level	50				
8.	Conc	lusion	55				
-		CO.					
CHAPTER							
-		e Nature of Interests in Oil and Gas in Accession and	50				
		tems of Mining Law	59 59				
1.	Introduction						
2.	Accession Systems						
	2.1 Nature of Landowner's Interest in Oil and Gas <i>In Situ</i>2.2 The Legal Nature of the Oil and Gas Lease and the Lessee's Interest in Accession Systems						
		2.2.1 Legal Nature of Oil and Gas Lease	64 64				
		2.2.1 Legal Nature of Chand Gas Lease 2.2.2 Nature of Lessee's Interest Created by Oil and Gas	04				
		Lease	65				
3.	Dom	anial and Regalia Systems	69				
5.	3.1	Ownership of Petroleum and the Nature of Property Rights	07				
	0.1	Created in Petroleum Licences	70				
		3.1.1 Ownership of Petroleum in Domanial Regimes	70				
	3.2	Legal Character of Petroleum Licence	75				
	3.3	The Nature of Interests Granted by Petroleum Production					
	0.0	Licence	85				
		3.3.1 Onshore	85				
		3.3.2 Offshore	88				
		3.3.2.1 Theoretical Analysis	88				
	3.4	Evaluation of the Nature of Oil and Gas Lease or Production	00				
	011	Licence and the Interest Granted	100				
			200				
CHAPTER							
Property	-	ts in Discovered Petroleum Reservoir?	105				
1.	. Introduction 1						

2.	Petroleum Licence or Lease as Property				105		
	2.1	Acces	sion Syste	ems	105		
	2.2	Doma	nial Syste	ms	106		
3.	Incie	dents of Petroleum Production Licence / Lease as Property					
4.		Property Rights in 'Discovered Petroleum Reservoir'?					
	4.1						
	4.2		Overcoming the Challenges				
		4.2.1	-	Understanding of Scientific Advances	110		
			4.2.1.1	Petroleum Geology	110		
			4.2.1.2	Reservoir Engineering	111		
		4.2.2	Petroleu	m Development Phases	112		
			4.2.2.1	Preliminary Investigation Activities	112		
			4.2.2.2	The Exploration Surveying	113		
			4.2.2.3	Exploratory and Appraisal Wells Drilling	113		
			4.2.2.4	Development and Production	114		
			4.2.2.5	Decommissioning	114		
	4.3	Produ	ction Lice	nce as Symbol of Overlying Proprietary Rights	115		
		4.3.1	Concept	ual Analysis	116		
		4.3.2	Concept	ual Analysis Contextualised: To Determine			
			Whethe	r Discovered Petroleum Reservoir Is a Property			
			Right		120		
	4.4	Evalua	ation of 'I	Discovered Petroleum Reservoir' as 'Property			
		Rights		× ×	123		
	4.5	or Discovered Petroleum Reservoir as					
	'Property Rights': Theoretical Comparison						
		4.5.1		Right (or Labour) Theory/Desert Theory	125		
		4.5.2	Desert T		127		
			4.5.2 1	An Assessment of Labour Theory, Its Basis			
			· · · ·	for Rule of Capture and Its Application to			
				Oil and Gas Straddling Reservoir	129		
		, , , , , , , , , , , , , , , , , , , ,		cupation / First Possession Theories	132		
		4.5.4		an / Economic Theories	133		
				Utilitarian	133		
				Economic Justification	135		
			4.5.4.3	Evaluation of Economic Justifications for			
				Rule of Capture: Transition from One Property			
				System to Another	137		
			4.5.4.4	Shortcomings of Economic Justification	140		
5.	Con	clusion			141		
CHAP		- 6 11 ''		Anna T. Anna and Trania I' i'	1 4 0		
			-	ture I – Accession Jurisdiction	143		
1.					143		
2.	Historical Background 14						

2. Historical Backgroun	nd
-------------------------	----

3.	3. United States				
	3.1	Non-ownership Theory	148		
	3.2	Ownership in Place Theory	149		
	3.3	Qualified Ownership Theory	150		
4.	Clas	ssical Rule of Capture Cases			
5.	. Effects of the Rule of Capture				
	5.1	Negative Effects	159		
		5.1.1 Competitive Drilling	159		
		5.1.2 Physical and Economic Wastes	160		
		5.1.3 Enhanced Oil Recovery	161		
		5.1.4 Common Property Regime	161		
		5.1.5 Destroyer of Title to Reservoir Oil and Gas	162		
		5.1.6 Violates Fundamental Rights of the Investor	163		
	5.2	Positive Effects	163		
6.	Alter	matives to the Rule	164		
7.	Resp	oonses to the Adverse Effects of the Rule of Capture	166		
	7.1	Enactment of Conservation Laws	166		
		7.1.1 Production Limitations (Market Demand Estimates,			
		Prorationing and Allowables)	166		
		7.1.2 Well Spacing	169		
		7.1.3 Pooling	170		
		7.1.4 Unitisation	170		
		7.1.5 Correlative Right	173		
8.	Impa	acts of Technological Advances in Wells Drilling on Rule of			
	Capt	ure A.Y	174		
	8.1	Horizontal Well	174		
	8.2	Trespass to Chattels	178		
	8.3	Hydraulic Fracturing	179		
9.	Cone	clusion	183		
CHAPTE					
The Re	-	of Unilateral Capture II – Domanial Jurisdictions	185		
1.		oduction	185		
2.		ed Kingdom	186		
3.	Nige		195		
	3.1	Unitisation Practice in Nigeria	197		
	3.2	Capture Problem in Nigeria	199		
	3.3	The Approach of the Regulatory Agency (DPR)	202		
		3.3.1 Non-producing Reservoirs (Green–Green)	202		
		3.3.2 Producing Reservoirs and Non-producing Reservoirs			
		(Brown–Green Reservoirs)	203		
		3.3.3 Producing Reservoirs (Brown–Brown)	204		
4.	Cana	ada and Australia	206		
	4.1 Canada				

5.	4.2 Neth	Austra erlands			207 219	
5.	5.1			ctice / Capture Problem in Netherlands	221	
6.		lusion		cuce / Capture i roblem in Nethenands	228	
0.	COIIC	.1051011			220	
CHAPTER						
Protecti	ng Pro	operty F	Right in I	Discovered Petroleum Reservoir	233	
1.	Intro	duction			233	
2.	Retro	oactivity	v of Unitis	sation Order, Costs and Production	234	
	2.1	Access	sion Regii	nes	234	
		2.1.1	Texas		235	
		2.1.2	Louisiar	la	235	
		2.1.3	Oklahor	na	236	
		2.1.4	North D	akota	238	
		2.1.5	Nebrask	a 🔨	239	
	2.2	Domai	nial Regir	nes	240	
		2.2.1	Nigeria	nes	241	
	2.3	Policy	Analysis	\sim	244	
3.	Trigg	-	-	Rights in Discovered Petroleum Reservoir	245	
4.	Protecting Property Rights in Discovered Petroleum Reservoir:					
	Applicability of Investment Treaties and International Human					
	Rights Laws					
	4.1			aties (BITs/Mills)	249 249	
		4.1.1		to Enjoin Unitisation to Prevent Unilateral		
			Drainag		249	
		4.1.2	0	to Make Unitisation Order Effective from		
			Date of First Production or the Date the Innocent Party			
			Established Straddling Reservoir			
		4.1.3	- / /	Equitable Treatment	253 263	
				cess Principle	267	
		4.1.5 Good Faith Principle				
		4.1.6		g the above Investment Treaties Principles to	268	
		1.1.0		al Capture	269	
	4.2	Intern		uman Rights Law	273	
	1.2	4.2.1 The Rights Guaranteed by A1P1 and Responsibility of		215		
		1.2.1	State	the Guaranteed by fift I and Responsibility of	274	
		4.2.2		ences with Property	275	
		1.2.2	4.2.2.1		215	
			1,2,2,1	Contained in the Second Sentence of the First		
				Paragraph)	276	
			4 2 2 2	Lawfulness of Deprivation	278	
				Public Interest / General Interest of	210	
			ч.2.2.3	Deprivation	279	
					419	

	4.2.2.4 Control of the Use of Property (The Third	
	Rule Contained in the Second Paragraph of	
	A1P1)	281
	4.2.2.5 Fair Balance / Proportionality Test	282
	4.2.2.6 Interference with Peaceful Enjoyment of	
	Possession (The First Rule Contained in the	
_	First Sentence of the First Paragraph)	285
5.	An Assessment of the Applicability of AIPI to Unilateral Capture	287
6.	Conclusion	291
CHAPTER	8	
Conclus	ions	293
1.	Answers to the Main Questions	293
2.	Protectable Property Right in Petroleum Reservoir as Solution	299
3.	Triggers for Property Rights in Discovered Petroleum Reservoir	300
4.	Limitation of 'Protectable Property Rights in Discovered Petroleum	
	Reservoir as a Solution	301
5.	Further Research	302
Bibliogra	Further Research aphy Cases	303
Table of		212
Table of	Cases	313
Table of	Legislations, Agreements, Treaties and Guidelines	323
Index	Legislations, Agreements, Treaties and Guidelines	327
	A	