Datasheet on Polymer Flood Project (1)

Attribute		Data for the Project
Reservoir		**East Bodo Upper Mannville "A" Pool (Lloyd)**
Project		**Associated Polymer Flood**
Operator		**Pengrowth Energy**
Reservoir Temperature	(˚C)	20
Oil Density	(kg/m^3)	966
Solution Gas@ P_b	(m^3/m^3)	7.2
Live Oil Viscosity	(mPa.s)	3,105
Connate Water Hardness	(ppm)	
Connate Water Salinity	(ppm)	29,000
Average Porosity	%	31
Average Permeability	(md)	1000
Dykstra-Parsons Coefficient (V)		-
Net Thickness	(m)	4.63
Connate Water Saturation	%	34
Project Area	(Ha)	54
Number of Active Producers		6
Number of Active Injectors		3
Number of Observation Wells		-
OOIP	($e3m^3$)	537.88
Formation Volume Factor (oil)	(m^3/m^3)	1.015
Hydrocarbon Pore Volume (HCPV)	($e3m^3$)	545.94
Prior to Polymer Injection		
Cumulative Oil Produced	($e3m^3$)	26.65
Remaining Reserves	($e3m^3$)	15.43
Ultimate Recovery Factor	(%)	2.86
Water-Oil Ratio		1.88
Recovery Process (Polymer, ASP, SP, etc)		
Alkali Concentration	(wt %)	0
Surfactant Concentration	(wt %)	0
Polymer Concentration	(wt %)	0.175
Main Slug Size	(%HCPV)	2.8 (injection continues)
Chase Polymer Concentration	(wt %)	-
Chase Slug Size	(%HCPV)	-

Datasheet on Polymer Flood Project (2)

Attribute	Data for the Project
Reservoir	**East Bodo Upper Mannville "A" Pool (Lloyd)**
Project	**Associated Polymer Flood**
Operator	**Pengrowth Energy**
OOIP (e3m^3)	537.88
HCPV (e3m^3)	545.94
Stabilized Injection Rate (m^3/d)	40 – 60
Time needed to inject 1 HCPV polymer (years)	30
Oil Rate Response (sustained increase) (m^3/d)	4.5
Water-Cut Response (reduction)	7.13
Initially Expected Recovery Factor	19
Latest Indicated Recovery Factor	0.9
Polymer injected to 2011 end (e3 kg)	25.5
Incremental oil to 2011 end (e3 m^3)	5.0
Polymer utilization to 2011 end (kg/ inc. Oil-m^3)	5.1
Ultimate polymer to be injected (e3 kg)	Yet to be determined
Ultimate Incremental oil (estimated) (e3 m^3)	34.2
Polymer Utilization (ultimate) (kg/ inc. Oil-m^3)	-
Recommended specific areas of technology focus while extending the scheme to analogous reservoirs (e.g. corrosion, injectivity, water treatment, etc)	Water treatment
Major Problems Encountered	Water treatment, stability of polymer viscosity-concentration
Major Project Accomplishments	Improvement in oil production, associated polymer injection with vertical wells
Next Planned Phase for the Project	Continue injection and monitoring