

Scenario: • 88' reservoir exposed • 300 mD • 3800 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
	Drill Pipe Only	No Drill Pipe	Drill Pipe Only	No Drill Pipe

Maximum Reservoir Exposed, High K	Scenario: • 88' reservoir exposed • 300 mD • 3800 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
		Drill Pipe Only	No Drill Pipe	Drill Pipe Only	No Drill Pipe
	Skin 0	24	45	31	82
	Skin 10	23	40	28	67
	Skin 25	21	34	26	50

Scenario: • 88' reservoir exposed • 300 mD • 2270 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
	Drill Pipe only	No Drill Pipe	Drill Pipe Only	No Drill Pipe
Skin 0	27	52	35	96
Skin 10	26	47	32	79
Skin 25	24	41	29	61

Flow increases by an average of 15% when wellhead pressure drops from 3800 psi to 2270 psi

Scenario: • 44' reservoir exposed • 170 mD • 3800 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
	Drill Pipe Only	No Drill Pipe	Drill Pipe Only	No Drill Pipe

Partial Reservoir Exposed, Low K	Scenario: • 44' reservoir exposed • 170 mD • 3800 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
		Drill Pipe Only	No Drill Pipe	Drill Pipe Only	No Drill Pipe
	Skin 0	21	35	26	53
	Skin 10	18	25	20	31
	Skin 25	14	17	15	18

Scenario: • 44' reservoir exposed • 170 mD • 2270 psi at wellhead	Hanger Failure (Annular Flow)		Shoetrack Failure (Casing Flow)	
	Drill Pipe only	No Drill Pipe	Drill Pipe Only	No Drill Pipe
Skin 0	25	42	30	65
Skin 10	21	31	24	39
Skin 25	17	21	18	23

Flow increases by an average of 22% when wellhead pressure drops from 3800 psi to 2270 psi