Appendix E Direct Shear Test Data

U.S. DEPARTMENT OF THE BUREAU OF RECLAM	Direct US Bureau Earth Sciences an Denve	Shear T of Reclam d Researc er, Colorado	est nation h Laborat	ory	RENT OF A
	Project: Salton Se Feature: Salton Se Drill Hole: DH-1-3 Depth: 0.00 - 1.5 Sample No. 54F-128 Specimen No: 1	ea ea 50 ft			чисн з. че
Shea	Specimen Type: Intact Surface Preperation: Intact	Compacted Dost Break	Precut S	Shear Surface	
Da	Tested By: Z. Erdog Date Testing Started: 5/13/200 te Testing Completed: 5/14/200	an 3 3			
	Specimen Dimensi Specimen Ar Shear Surface Leng	on: ea: gth:	2X2 in 4.00 in ² 2.00 in		
	Desirec Actual Normal Desi Actual Strain	l Normal Str Stress App ired Strain F Rate as Tes	ress: blied: Rate: sted:	7.5 lbf/in ² 7.5 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Re	sults		
	Pea Relative Lateral Displa Post Pea Relative Lateral Displaceme	Normal Sta ak Shear Sta cement (Pe ak Shear St ent (Post Pe	ress: ress: eak): ress: eak):	7.5 lbf/in ² 10.3 lbf/in ² 4.0 % 8.9 lbf/in ² 6.8 %	
	Initial Test Specimen I Initial Test Specimen Final Test Specimen	Dry Unit We Water Con Water Con	ight: tent: tent:	87.9 lbf/ft ³ 39.0 % 19.8 %	
Da Comments: Ini	Raw Data File: Salton Se ate Data File Created: 5/13/200 ial Test Specimen Height = 1.04	ea\Pad1Sar 3 13:59 4 in.	mple3at7_5	5'psi.dat	

Direct Shear Test US Bureau of Reclamation Earth Sciences and Research Lab Denver, Colorado	boratory
Project: Salton Sea Feature: Salton Sea Drill Hole: DH-1-3 Depth: 0.00 - 1.50 ft Sample No. 54F-128 Specimen No: 2	WARCH 3, 184
Specimen Type: Intact Compacted Shear Surface: Intact Post Break	Precut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 4/24/2003 Date Testing Completed: 4/25/2003	
Specimen Dimension:2X2 iSpecimen Area:4.00 iShear Surface Length:2.00 i	n in ² in
Desired Normal Stress: Actual Normal Stress Applied: Desired Strain Rate: Actual Strain Rate as Tested:	15.0 lbf/in ² 15.0 lbf/in ² 0.005 in/min 0.005 in/min
Test Results	
Normal Stress: Peak Shear Stress: Relative Lateral Displacement (Peak): Post Peak Shear Stress: Relative Lateral Displacement (Post Peak):	15.0 lbf/in ² 20.6 lbf/in ² 7.5 % 19.8 lbf/in ² 8.5 %
Initial Test Specimen Dry Unit Weight: Initial Test Specimen Water Content: Final Test Specimen Water Content:	83.6 lbf/ft ³ 36.2 % 17.3 %
Raw Data File: Salton Sea\Pad1Sample3 Date Data File Created: 4/24/2003 13:48	at15psi.dat
Comments: Initial Test Specimen Height = 1.27 in.	

BUREAU OF RECLAMATION	ct Shear Test au of Reclamation and Research Laboratory over, Colorado
Project: Salton Feature: Salton Drill Hole: DH-1- Depth: 0.00 - Sample No. 54F-1 Specimen No: 3	NSea NSea 3 1.50 ft 28
Specimen Type: □ Intac Shear Surface Preperation: ☑ Intact	t ☑ Compacted □ Post Break □ Precut Shear Surface
Tested By: Z. Erd Date Testing Started: 4/24/2 Date Testing Completed: 4/25/2	ogan 003 003
Specimen Dime Specimen Shear Surface Le	nsion: 2X2 in Area: 4.00 in ² ength: 2.00 in
Desi Actual Norr D Actual Stra	red Normal Stress:30.0 lbf/in²nal Stress Applied:30.0 lbf/in²esired Strain Rate:0.005 in/minnin Rate as Tested:0.005 in/min
	Test Results
ا Relative Lateral Dis Post F Relative Lateral Displace	Normal Stress:30.0 lbf/in²Peak Shear Stress:33.9 lbf/in²placement (Peak):5.9 %Peak Shear Stress:32.3 lbf/in²ment (Post Peak):7.5 %
Initial Test Specime Initial Test Specim Final Test Specim	n Dry Unit Weight: 78.2 lbf/ft ³ en Water Content: 37.7 % en Water Content: 18.8 %
Raw Data File: Salton Date Data File Created: 4/24/2	Sea∖Pad1Sample3at30psi.dat 003 14:12
Comments: Initial Lest Specimen Height = 1	.33 IN.

U.S. DEPARTMENT OF THE BUREAU OF RECLAM	Direct Shear US Bureau of Recl Earth Sciences and Resea Denver, Colora Project: Salton Sea	Test amation arch Lab ado	n boratory
	Feature: Salton Sea Drill Hole: DH-1-3 Depth: 0.00 - 1.50 ft Sample No. 54F-128 Specimen No: 4		
Shea	Specimen Type: Intact Compared	eted eak 🗖 F	Precut Shear Surface
Da	Tested By: Z. Erdogan Date Testing Started: 4/24/2003 te Testing Completed: 4/25/2003		
	Specimen Dimension: Specimen Area: Shear Surface Length:	2X2 i 4.00 i 2.00 i	in in ² in
	Desired Normal Actual Normal Stress A Desired Strai Actual Strain Rate as	Stress: opplied: n Rate: Tested:	60.0 lbf/in ² 60.0 lbf/in ² 0.005 in/min 0.005 in/min
	Test	Results	
	Normal Peak Shear Relative Lateral Displacement Post Peak Shear Relative Lateral Displacement (Post	Stress: Stress: (Peak): Stress: Peak):	60.0 lbf/in ² 57.1 lbf/in ² 7.4 % 56.4 lbf/in ² 8.4 %
	Initial Test Specimen Dry Unit V Initial Test Specimen Water C Final Test Specimen Water C	Veight: ontent: ontent:	82.4 lbf/ft ³ 36.9 % 20.4 %
D	Raw Data File: Salton Sea\Pad1; ate Data File Created: 4/24/2003 14:35	Sample3	3at60psi.dat
	iar rest opecimen neight – 1.55 ill.		

BUREAU OF RECLAMATION	Shear Test u of Reclamation nd Research Laboratory ver, Colorado
Project: Salton S Feature: Salton S Drill Hole: DH-7-7 Depth: 0.00 -1. Sample No. 54F-132 Specimen No: 1	Sea Sea 25 ft 2
Specimen Type: DIntact Shear Surface Preperation: DIntact	Compacted Post Break Precut Shear Surface
Tested By: Z. Erdo Date Testing Started: 5/13/20 Date Testing Completed: 5/14/20	gan 03 03
Specimen Dimens Specimen A Shear Surface Ler	sion: 2X2 in area: 4.00 in ² agth: 2.00 in
Desire Actual Norma Des Actual Strair	ed Normal Stress: 7.5 lbf/in ² al Stress Applied: 7.5 lbf/in ² sired Strain Rate: 0.005 in/min n Rate as Tested: 0.005 in/min
	Test Results
Pe Relative Lateral Displ Post Pe Relative Lateral Displacem	Normal Stress: 7.5 lbf/in^2 eak Shear Stress: 10.6 lbf/in^2 acement (Peak): 5.5% eak Shear Stress: 9.9 lbf/in^2 ent (Post Peak): 7.6%
Initial Test Specimen Initial Test Specime Final Test Specime	Dry Unit Weight: 113.4 lbf/ft ³ n Water Content: 44.8 % n Water Content: 18.3 %
Raw Data File: Salton S Date Data File Created: 5/13/20	Sea\Pad7Sample7at7_5psi.dat 03 13:23
estimente. Initial rest opecimen neight – 1.t	די, ווי. יייייייייייייייייייייייייייייייייי

Direct Shear Test	ATMENT OF THE
US Bureau of Reclamation	38 33
Earth Sciences and Research Lab	oratory
BUREAU OF RECLAMATION	
Project: Salton Sea	4ACH 3, 1842
Fosturo: Salton Sea	
Deptn: 0.00 - 1.25 ft	
Sample No. 54F-132	
Test Specimen Interval: 2	
Specimen Type: UIntact Compacted	
Shear Surface Preperation: DIntact Dest Break Pr	recut Shear Surface
Tested By: Z. Erdogan	
Date Testing Started: 5/5/2003	
Date Testing Completed: 5/6/2003	
Specimen Dimension: 2X2 ir	า
Specimen Area: 4 00 ir	n^2
Shear Surface Length: 2 00 ir	n
Shear Sunace Length. 2.00 h	1
Desired Normal Stress:	15.0 lbf/in^2
Desired Normal Stress.	
Actual Normal Stress Applied:	15.0 lbf/in ²
Desired Strain Rate:	0.005 in/min
Actual Strain Rate as Tested:	0.005 in/min
Test Results	
Normal Stress:	15.0 lbf/in ²
Peak Shear Stress	15.0 lbf/in^2
Relative Lateral Displacement (Peak)	40%
	$-1.0 / 10^{2}$
Post Peak Sheat Stress.	
Relative Lateral Displacement (Post Peak):	6.4 %
	3
Initial Test Specimen Dry Unit Weight:	105.0 lbf/ft ³
Initial Test Specimen Water Content:	43.3 %
Final Test Specimen Water Content:	15.8 %
Raw Data File: Salton Sea\Pad7Sample7a	at15psi.dat
Date Data File Created: 5/5/2003 14:02	
Comments: Initial Test Specimen Height = 1.04 in.	

BUREAU OF RECLAMATION	ar Test clamation earch Laboratory rado
Project: Salton Sea Feature: Salton Sea Drill Hole: DH-7-7 Depth: 0.00 - 1.25 ft Sample No. 54F-132 Test Specimen Interval: 3	**46CH 3. 1945
Specimen Type: Intact I Com Shear Surface Preperation: Intact Post	Break Precut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 5/5/2003 Date Testing Completed: 5/6/2003	
Specimen Dimension: Specimen Area: Shear Surface Length:	2X2 in 4.00 in ² 2.00 in
Desired Norm Actual Normal Stress Desired Str Actual Strain Rate a	al Stress:30.0 lbf/in²Applied:30.0 lbf/in²ain Rate:0.005 in/mins Tested:0.005 in/min
Tes	t Results
Norma Peak Shea Relative Lateral Displacemen Post Peak Shea Relative Lateral Displacement (Po	al Stress: 30.0 lbf/in^2 ar Stress: 32.1 lbf/in^2 ar Stress: 4.4% ar Stress: 31.3 lbf/in^2 st Peak): 6.2%
Initial Test Specimen Dry Uni Initial Test Specimen Water Final Test Specimen Water	t Weight: 111.9 lbf/ft ³ Content: 43.4 % Content: 16.2 %
Raw Data File: Salton Sea\Pad Date Data File Created: 5/5/2003 14:20 Comments: Initial Test Specimen Height = 1.05 in.	7Sample7at30psi.dat

BUREAU OF RECLAMATION BUREAU OF RECLAMATION	oratory
Project: Salton Sea Feature: Salton Sea Drill Hole: DH-7-7 Depth: 1.25 ft Sample No. 54F-132 Test Specimen Interval: 4	8447CH 3, 1813
Specimen Type: Intact Compacted Shear Surface Preperation: Intact Post Break	recut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 5/5/2003 Date Testing Completed: 5/6/2003	
Specimen Dimension:2X2 irSpecimen Area:4.00 irShear Surface Length:2.00 ir	n n ² n
Desired Normal Stress: Actual Normal Stress Applied: Desired Strain Rate: Actual Strain Rate as Tested:	60.0 lbf/in ² 60.0 lbf/in ² 0.005 in/min 0.005 in/min
Test Results	
Normal Stress: Peak Shear Stress: Relative Lateral Displacement (Peak): Post Peak Shear Stress: Relative Lateral Displacement (Post Peak):	60.0 lbf/in ² 50.4 lbf/in ² 5.5 % 49.0 lbf/in ² 6.6 %
Initial Test Specimen Dry Unit Weight: Initial Test Specimen Water Content: Final Test Specimen Water Content:	112.0 lbf/ft ³ 45.6 % 16.0 %
Raw Data File: Salton Sea\Pad7Sample7a Date Data File Created: 5/5/2003 14:55 Comments: Initial Test Specimen Height = 1.09 in.	at60psi.dat

BUREAU OF RECLAMATION BUREAU OF RECLAMATION	Test mation ch Laboratory
Project: Salton Sea Feature: Salton Sea Drill Hole: DH-4-10 Depth: 0.00 - 1.00 ft Sample No. 54F-135 Specimen No: 1	MARCH 3, 1943
Specimen Type: Intact Compacted Shear Surface Preperation: Intact Post Break	d Precut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 4/28/2003 Date Testing Completed: 4/29/2003	
Specimen Dimension: Specimen Area: Shear Surface Length:	2X2 in 4.00 in ² 2.00 in
Desired Normal S Actual Normal Stress Ap Desired Strain Actual Strain Rate as Te	tress: 7.5 lbf/in ² plied: 7.5 lbf/in ² Rate: 0.005 in/min ested: 0.005 in/min
Test Re	esults
Normal Si Peak Shear S Relative Lateral Displacement (P Post Peak Shear S Relative Lateral Displacement(Post P	tress: 7.5 lbf/in ² tress: 7.8 lbf/in ² teak): 7.5 % tress: 7.3 lbf/in ² eak): 8.9 %
Initial Test Specimen Dry Unit We Initial Test Specimen Water Cor Final Test Specimen Water Cor	eight: 80.4 lbf/ft ³ ntent: 54.6 % ntent: 19.6 %
Raw Data File: Salton Sea\Pad4Sa Date Data File Created: 4/28/2003 13:21	mple10at7_5psi.dat
Comments: Initial Test Specimen Height = 1.33 in.	

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION	Direct US Bureau Earth Sciences an Denve	Shear T of Reclan d Researc er, Colorado	est nation h Laborat	ory	RENT OF THE NEW OF THE
Spe	Project: Salton Se Feature: Salton Se Drill Hole: DH-4-10 Depth: 0.00 - 1.0 Sample No. 54F-135 ecimen No: 2	ea ea 00 ft			**************************************
Speci Shear Surface Pr	men Type: Intact reperation: Intact	Compacted Dost Break	Precut S	Shear Surface	
Date Testi Date Testing (Tested By: Z. Erdoga ng Started: 5/1/2003 Completed: 5/2/2003	an			
	Specimen Dimensio Specimen Aro Shear Surface Leng	on: ea: yth:	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desi Actual Strain	l Normal St Stress App red Strain F Rate as Te	ress: blied: Rate: sted:	15 lbf/in ² 15 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Re	sults		
Relative	Pea elative Lateral Displac Post Pea e Lateral Displaceme	Normal Sta ak Shear St cement (Pe ak Shear St nt (Post Pe	ress: ress: eak): ress: eak):	15.0 lbf/in ² 19.3 lbf/in ² 5.9 % 18.6 lbf/in ² 7.0 %	
In I	itial Test Specimen D nitial Test Specimen Final Test Specimen	Dry Unit We Water Con Water Con	ight: tent: tent:	89.0 lbf/ft ³ 59.3 % 19.8 %	
Raw Date Data File Comments: Initial Test Sp	Data File: Salton Se e Created: 5/1/2003	ea\Pad4Sar 11:38	mple10at15	ōpsi'.dat	
	eoimen neight – 1.08	, 111.			

BUREAU OF RECLAMATION	Direct S US Bureau Sciences and Denve	Shear T of Reclan d Researc r, Colorado	est nation h Laborat	ory	RUNENT OF THE RUNCH
Pro Fea Drill D Sample Specime	oject: Salton Se ature: Salton Se Hole: DH-4-10 epth: 0.00 - 1.0 e No. 54F-135 n No: 3	ea ea 00 ft			49CH 3. 18
Specimen ⁻ Shear Surface Prepera	Type: □Intact tion: ⊡Intact	Compacted Dost Break	Precut S	Shear Surface	
Teste Date Testing Sta Date Testing Compl	d By: Z. Erdoga arted: 5/1/2003 eted: 5/2/2003	an			
Spe	cimen Dimensio Specimen Aro ar Surface Leng	on: ea: µth:	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desi Actual Strain	Normal St Stress App red Strain F Rate as Te	ress: blied: Rate: sted:	30 lbf/in ² 30 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Re	sults		
Relative Relative Late	Pea Lateral Displac Post Pea ral Displaceme	Normal St Ik Shear St cement (Pe Ik Shear St nt (Post Pe	ress: ress: eak): ress: eak):	30.0 lbf/in ² 28.3 lbf/in ² 7.1 % 27.1 lbf/in ² 8.6 %	
Initial To Initial Final	est Specimen D Test Specimen Test Specimen	Dry Unit We Water Con Water Con	ight: tent: tent:	81.6 lbf/ft ³ 60.8 % 20.8 %	
Raw Data Date Data File Crea Comments: Initial Test Specime	File: Salton Se ated: 5/1/2003	ea\Pad4Sar 9:01	mple10at3(Opsi.dat	

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION	Direct US Bureau Earth Sciences an Denve Project: Salton Se	Shear T of Reclarr d Researc er, Colorado	est nation h Laborat	ory	ATTICH 3. 1849
S	Feature: Salton Se Drill Hole: DH-4-10 Depth: 0.00 - 1.0 Sample No. 54F-135 Specimen No: 4	ea 00 ft			
Spe Shear Surface	ecimen Type: Intact Preperation: Intact	Compacted Dost Break	Precut S	Shear Surface	
Date Te Date Testin	Tested By: Z. Erdoga sting Started: 5/1/2003 g Completed: 5/2/2003	an			
	Specimen Dimensi Specimen Ard Shear Surface Leng	on: ea: yth:	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desi Actual Strain	l Normal Str Stress App red Strain F Rate as Tes	ress: blied: Rate: sted:	7.5 lbf/in ² 60 lbf/in ² 0.005 in/mir 0.005 in/mir	2 2 1
		Test Re	sults		
Relat	Pea Relative Lateral Displac Post Pea ive Lateral Displaceme	Normal Str ak Shear Str cement (Pe ak Shear Str nt (Post Pe	ress: ress: eak): ress: eak):	60.0 lbf/in ² 53.4 lbf/in ² 7.9 % 53.0 lbf/in ² 8.6 %	2
	Initial Test Specimen E Initial Test Specimen Final Test Specimen	Dry Unit We Water Con Water Con	ight: tent: tent:	83.6 lbf/ft ³ 63.1 % 20.2 %	
Ra Date Data I Comments: Unitial Test S	aw Data File: Salton Se File Created: 5/1/2003	ea\Pad4Sar 10:51	mple10at60	Opsi.dat	
	specimen neight – 1.00	,			

U.S. DEPARTMENT OF THE INTERIO BUREAU OF RECLAMATION	Direct S US Bureau Earth Sciences and Denver	Shear T of Reclam Researc , Colorado	est nation h Laborat	ory	RENT OF A
	Project: Salton Se Feature: Salton Se Drill Hole: DH-5-11 Depth: 0.00 - 0.92 Sample No. 54F-136 Specimen No: 1	a a 2 ft			AMCH 3' TR
Shear Su	Specimen Type: □ Intact fface Preperation: ⊡ Intact	Compacted	Precut S	Shear Surface	
Da Date T	Tested By: Z. Erdoga te Testing Started: 6/20/2003 esting Completed: 6/21/2003	n			
	Specimen Dimensio Specimen Are Shear Surface Lengt	n: a: h:	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desir Actual Strain F	Normal Str Stress App ed Strain F Rate as Tes	ress: llied: Rate: sted:	7.5 lbf/in ² 7.5 lbf/in ² 0.005 in/mir 0.005 in/mir	1
		Test Re	sults		
	Peal Relative Lateral Displac Post Peal Relative Lateral Displacemer	Normal Str < Shear Str ement (Pe < Shear Str t (Post Pe	ress: ress: eak): ress: eak):	7.5 lbf/in ² 12.5 lbf/in ² 5.6 % 10.2 lbf/in ² 8.7 %	
	Initial Test Specimen D Initial Test Specimen \ Final Test Specimen \	ry Unit Wei Nater Cont Nater Cont	ight: tent: tent:	86.6 lbf/ft ³ 19.5 % 20.7 %	
Date I	Raw Data File: Salton Se Data File Created: 6/20/2003	a\Pad5Sar 9:45 in	nple11at7_	_5psi.dat	

BUREAU OF RECLAMATION	Shear Test of Reclamation d Research Laboratory r, Colorado
Project: Salton Se Feature: Salton Se Drill Hole: DH-5-11 Depth: 0.00 - 0.9 Sample No. 54F-136 Specimen No: 2	a a 2 ft
Specimen Type: Intact Shear Surface Preperation: Intact	Compacted Post Break Precut Shear Surface
Tested By: Z. Erdoga Date Testing Started: 6/20/2002 Date Testing Completed: 6/21/2002	
Specimen Dimensio Specimen Are Shear Surface Leng	on: 2X2 in ea: 4.00 in ² th: 2.00 in
Desired Actual Normal Desi Actual Strain I	Normal Stress:15.0 lbf/in²Stress Applied:15.0 lbf/in²red Strain Rate:0.005 in/minRate as Tested:0.005 in/min
	Test Results
Pea Relative Lateral Displac Post Pea Relative Lateral Displaceme	Normal Stress:15.0 lbf/in²k Shear Stress:20.3 lbf/in²cement (Peak):6.5 %k Shear Stress:19.5 lbf/in²nt (Post Peak):8.9 %
Initial Test Specimen D Initial Test Specimen Final Test Specimen	ry Unit Weight: 92.9 lbf/ft ³ Water Content: 15.9 % Water Content: 18.4 %
Raw Data File: Salton Se Date Data File Created: 6/20/2003	a\Pad5Sample11at15psi.dat 3 10:26
Comments: Initial Test Specimen Height = 1.31	in.

U.S. DEPARTMENT OF THE INTERIO BUREAU OF RECLAMATION	Direct S US Bureau Earth Sciences and Denver	Shear To of Reclam Research Colorado	est ation n Laborate	ory .	STATE OF THE STATE
	Project: Salton Sea Feature: Salton Sea Drill Hole: DH-5-11 Depth: 0.00 - 0.92 Sample No. 54F-136 Specimen No: 3	a a 2 ft			WCH 3. 10
Shear Su	Specimen Type: Intact rface Preperation: Intact	✓ Compacted □ Post Break	Precut S	Shear Surface	
Da Date T	Tested By: Z. Erdoga te Testing Started: 6/25/2003 esting Completed: 6/26/2003	n			
	Specimen Dimensio Specimen Are Shear Surface Lengt	n: a: 4 h: 2	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desir Actual Strain F	Normal Str Stress App ed Strain R Rate as Tes	ess: lied: ate: sted:	30.0 lbf/in ² 30.0 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Res	sults		
	Peal Relative Lateral Displac Post Peal Relative Lateral Displacemer	Normal Str < Shear Str ement (Pe < Shear Str it (Post Pe	ess: ess: ak): ess: ak):	30.0 lbf/in ² 33.2 lbf/in ² 7.1 % 28.6 lbf/in ² 10.6 %	
	Initial Test Specimen Du Initial Test Specimen \ Final Test Specimen \	ry Unit Wei Water Cont Water Cont	ght: ent: ent:	94.4 lbf/ft ³ 23.5 % 19.7 %	
Date I	Raw Data File: Salton Se Data File Created: 6/25/2003 Test Specimen Height = 1.14	a\Pad5San 9:52 in.	nple11at30)psi.dat	

U.S. DEPARTMENT OF D	US Bureau Earth Sciences and Denver	Shear T of Reclarr d Researc r, Colorado	est nation h Laborato	ory	AT A CONTRACT OF
	Project: Salton Se Feature: Salton Se Drill Hole: DH-5-11 Depth: 0.00 - 0.9 Sample No. 54F-136 Specimen No: 4	a a 2 ft			AUCH 3. 18
She	Specimen Type: □ Intact ar Surface Preperation: ⊡ Intact	Compacted Post Break	Precut S	hear Surface	
E	Tested By: Z. Erdoga Date Testing Started: 6/25/2003 Pate Testing Completed: 6/26/2003	n ;			
	Specimen Dimensio Specimen Are Shear Surface Lengt	on: ea: th:	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desir Actual Strain F	Normal Str Stress App ed Strain F Rate as Tes	ress: blied: Rate: sted:	60.0 lbf/in ² 60.0 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Re	sults		
	Peal Relative Lateral Displac Post Peal Relative Lateral Displacemer	Normal Str k Shear Str ement (Pe k Shear Str ht (Post Pe	ress: ress: eak): ress: eak):	60.0 lbf/in ² 58.6 lbf/in ² 7.2 % 50.6 lbf/in ² 11.3 %	
	Initial Test Specimen D Initial Test Specimen V Final Test Specimen V	ry Unit We Water Con Water Con	ight: tent: tent:	89.6 lbf/ft ³ 17.6 % 17.9 %	
Comments: I	Raw Data File: Salton Se Date Data File Created: 6/25/2003 hitial Test Specimen Height = 1.21	a\Pad5Sar 10:16 in.	nple11at60)psi.dat	
	·····				

U.S. DEPARTMENT OF T	US Burea Earth Sciences a Denv	Shear T u of Reclan nd Researc ver, Colorado	est nation th Labo	oratory	US DEA	ENT OF THE READ)
	Project: Salton S Feature: Salton S Drill Hole: DH-5-1 Depth: 0.00 0.9 Sample No. 54F-136 Specimen No: 5	Sea Sea 1 92 ft S			~	PCH 3. 197	
She	Specimen Type: □ Intact ar Surface Preperation: ⊡ Intact	Compacted Dost Break	l 🗖 Pre	ecut Shear Surf	ace		
C	Tested By: Z. Erdo Date Testing Started: 6/25/20 Date Testing Completed: 7/3/200	jan D3 3					
	Specimen Dimens Specimen A Shear Surface Ler	sion: .rea: ìgth:	2X2 in 4.00 in 2.00 in	2			
	Desire Actual Norma De Actual Strair	d Normal St al Stress App sired Strain F n Rate as Te	ress: blied: Rate: sted:	30 30 0.000028 0.000027	lbf/in ² lbf/in ² in/min in/min		
		Test Re	sults				
	Pe Relative Lateral Displ Post Pe Relative Lateral Displacem	Normal St eak Shear St acement (Pe eak Shear St ent (Post Pe	ress: ress: eak): ress: eak):	30.0 34.41 3.3 51.1 3.7	lbf/in ² lbf/in ² % lbf/in ² %		
	Initial Test Specimen Initial Test Specime Final Test Specime	Dry Unit We n Water Con n Water Con	ight: tent: tent:	96.6 16.1 20.5	lbf/ft ³ % %		
ا Comments: ا	Raw Data File: Salton S Date Data File Created: 6/25/20 hitial Test Specimen Height = 1.1	Sea\Pad5Sar 03 11:11 17 in.	mple11;	at30psiat0 <u>.</u>	_00002.da	at	

Direct Shear Test US Bureau of Reclamation Earth Sciences and Research Laboratory Denver, Colorado
Project: Salton Sea Feature: Salton Sea Sampling Location: Pad No. 6, Exc. No. 13 Depth: 0.00 - 1.50 ft Sample No. 54F-138 Specimen No: 1
Specimen Type: Intact Compacted Shear Surface Preperation: Intact Post Break Precut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 6/17/2003 Date Testing Completed: 6/18/2003
Specimen Dimension:2X2 inSpecimen Area:4.00 in²Shear Surface Length:2.00 in
Desired Normal Stress:7.5 lbf/in²Actual Normal Stress Applied:7.5 lbf/in²Desired Strain Rate:0.005 in/minActual Strain Rate as Tested:0.005 in/min
Test Results
Normal Stress:7.5 lbf/in²Peak Shear Stress:7.7 lbf/in²Relative Lateral Displacement (Peak):5.1 %Post Peak Shear Stress:6.9 lbf/in²Relative Lateral Displacement (Post Peak):8.3 %
Initial Test Specimen Dry Unit Weight:105.7 lbf/ft3Initial Test Specimen Water Content:18.7 %Final Test Specimen Water Content:9.2 %
Raw Data File: Salton Sea\Pad6Sample13at7_5psi.dat Date Data File Created: 6/17/2003 10:19 Comments: Initial Test Specimen Height = 1.20 in.

U.S. DEPARTMENT OF THE	US Bureau Earth Sciences an Denve	Shear Te of Reclama d Research er, Colorado	est ation Laborato	ory 5	AND TOP
	Project: Salton Se Feature: Salton Se Drill Hole: Pad No. (Depth: 0.00 - 1.5 Sample No. 54F-138 Specimen No: 2	ea ea 6, Exc. No. 1 50 ft	13		AMACH 3. 1849
Shea	Specimen Type: Intact Surface Preperation: Intact	Compacted Dost Break	Precut S	hear Surface	
Da	Tested By: Z. Erdoga Date Testing Started: 6/17/2003 te Testing Completed: 6/18/2003	an 3 3			
	Specimen Dimensio Specimen Aro Shear Surface Leng	on: 2 ea: 4 gth: 2	2X2 in 4.00 in ² 2.00 in		
	Desired Actual Normal Desi Actual Strain	l Normal Stre Stress Appl red Strain R Rate as Tes	ess: ied: ate: ted:	15.0 lbf/in ² 15.0 lbf/in ² 0.005 in/min 0.005 in/min	
		Test Res	ults		
	Pea Relative Lateral Displac Post Pea Relative Lateral Displaceme	Normal Stre ak Shear Stre cement (Pea ak Shear Stre nt (Post Pea	ess: ess: ak): ess: ak):	15.0 lbf/in ² 16.0 lbf/in ² 3.8 % 13.4 lbf/in ² 7.7 %	
	Initial Test Specimen D Initial Test Specimen Final Test Specimen	Dry Unit Weig Water Conte Water Conte	ght: ent: ent:	99.5 lbf/ft ³ 19.1 % 10.1 %	
Di	Raw Data File: Salton Se ate Data File Created: 6/17/2003	ea\Pad6Sam 3 11:06	ple13at15	psi.dat	
Comments: Ini	tial Test Specimen Height = 1.15	5 in.			

BUREAU OF RECLAMATION BUREAU OF RECLAMATION	atory
Project: Salton Sea Feature: Salton Sea Sampling Location: Pad No. 6, Exc. No. 13 Depth: 0.00 - 1.50 ft Sample No. 54F-138 Specimen No: 3	*4ACH 3. 184
Specimen Type: Intact Compacted Shear Surface Preperation: Intact Post Break Precu	ut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 6/17/2003 Date Testing Completed: 6/18/2003	
Specimen Dimension:2X2 inSpecimen Area:4.00 in²Shear Surface Length:2.00 in	
Desired Normal Stress: Actual Normal Stress Applied: Desired Strain Rate: Actual Strain Rate as Tested:	30.0 lbf/in ² 30.0 lbf/in ² 0.005 in/min 0.005 in/min
Test Results	
Normal Stress: Peak Shear Stress: Relative Lateral Displacement (Peak): Post Peak Shear Stress: Relative Lateral Displacement (Post Peak):	30.0 lbf/in ² 32.0 lbf/in ² 3.5 % 14.6 lbf/in ² 7.0 %
Initial Test Specimen Dry Unit Weight: Initial Test Specimen Water Content: Final Test Specimen Water Content:	105.9 lbf/ft ³ 13.4 % 8.7 %
Raw Data File: Salton Sea\Pad6Sample13at Date Data File Created: 6/17/2003 11:51	:30psi.dat
Comments: Initial Test Specimen Height = 1.17 in.	

BUREAU OF RECLAMATION BUREAU OF RECLAMATION BUREAU OF RECLAMATION BUREAU OF RECLAMATION BUREAU OF RECLAMATION BUREAU OF RECLAMATION BUREAU OF RECLAMATION	n boratory
Project: Salton Sea Feature: Salton Sea Sampling Location: Pad No. 6 Exc. No. 13 Depth: 0.00 -1.50 ft Sample No. 54F-138 Specimen No: 4	*4ACH 3, 184
Specimen Type: Intact Compacted Shear Surface Preperation: Intact Post Break	Precut Shear Surface
Tested By: Z. Erdogan Date Testing Started: 6/20/2003 Date Testing Completed: 6/21/2003	
Specimen Dimension:2X2Specimen Area:4.00Shear Surface Length:2.00	in in ² in
Desired Normal Stress: Actual Normal Stress Applied: Desired Strain Rate: Actual Strain Rate as Tested:	60.0 lbf/in ² 60.0 lbf/in ² 0.005 in/min 0.005 in/min
Test Results	
Normal Stress: Peak Shear Stress: Relative Lateral Displacement (Peak): Post Peak Shear Stress: Relative Lateral Displacement (Post Peak):	60.0 lbf/in ² 51.3 lbf/in ² 5.1 % 48.1 lbf/in ² 8.4 %
Initial Test Specimen Dry Unit Weight: Initial Test Specimen Water Content: Final Test Specimen Water Content:	93.6 lbf/ft ³ 24.4 % 10.7 %
Raw Data File: Salton Sea\Pad6Sample1 Date Data File Created: 6/20/2003 8:28	3at60psi.dat
Comments: Initial Test Specimen Height = 1.20 in.	