		eaquin River Restoration Program Fish Hatchery		Central Valid		t - California	
	Salmo	nid Conservation & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal
	Alterna	ative 1 - 20 cfs Bypass Pipeline	REGION:	MP	UNIT PR	ICE LEVEL:	Oct-12
ivil -			FILE:			Joaquin River Restoration Progrative 1\SJRRP Friant Fish Hi	
PLANT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	Site & 24" Bypass Pipe Trench Items:		.,			#.
	1A	Unwatering (5 gpm pump, 4 month duration, 50% run-time for precipitation)	8140	1	ls	\$13,000.00	\$13,000.0
	1B	Stripping (1' deep, lawn & gravel parking lot)	8140	440	су	\$7.50	\$3,300.0
	1C	Common Pipe Excavation (10' deep, 2:1 in soils)	8140	1,000	су	\$8.00	\$8,000.0
	1D	Pipe Bedding (4" thick, select fill material)	8140	7.8	су	\$84.00	\$655.2
	1E	Compacted Backfill to 0.7 OD	8140	44	су	\$100.00	\$4,400.0
	1F	Compacting backfill (to 90% relative density)	8140	44	су	\$20.00	\$880.0
	1G	Uncompacted backfill above pipe to O.G.	8140	790	су	\$8.80	\$6,952.0
	1H	Replacing gravel surfacing (1' thick)	8140	135	су	\$76.00	\$10,260.0
	11	Replace lawn & topsoil, 1 foot deep	8140	570	sy	\$4.50	\$2,565.0
	1J	Reinforced concrete thrust block (7' x 7' x 7',	8140	12	су	\$700.00	\$8,400.0
		4,000 psi min.)				-	¥
	1K	Reinforcement for thrust block (150 lbs/cy)	8140	1,800	lbs	\$2.00	\$3,600.0
	1L	Cementitious material (.282 tons/cy, 6 sack mix)	8140	3.4	tons	\$210.00	\$714.0
	2	Flow-meter and PRV Valve Vault Items;		(1			
		*Note that there is (1) 8' x 10' flow meter vault &					
		(1) 16' x 8' PRV vault. PRV vaults contains (2)				i.	
		PRV's to reduce head to match existing pipe.					
	2A	Structure excavation (2:1 in soils, 10' deep)	8140	225	су	\$14.00	\$3,150.0
	2B	Reinforced Concrete (4,500 psi min.)	8140	40	су	\$1,100.00	\$44,000.0
	2C	Reinforcement (150 lbs/cy)	8140	6,000	lbs	\$2.00	\$12,000.0
. B	2D	Cementitious Materials (6 sack, 0.282 tons/cy)	8140	11,3	tons	\$210.00	\$2,373.0
	2E	Structural Backfill	8140	150	су	\$15.00	\$2,250.0
	2F	Compacting structural backfill (90% Rel. Dens.)	8140	150	су	\$15.00	\$2,250.0
	2G	Alum. grating (2" I-bar, 19-2 spacing, 5.1#/sf)	8140	670	lbs	\$12.00	\$8,040.0
	2H	Steel access ladder (10 ft tall, embed into vault	8140	2	ea	\$3,700.00	\$7,400.0
		wall @ comer, includes a removable "Ladder-	·				
		-Up" safety rail system through grating)				4	
1)	21	Steel bollards (8' tall, embed 4', fill with concrete)	8140	8	ea	\$1,500.00	\$12,000.0
		SUBTOTAL THIS SHEET	,				\$156,189.2
		QUANTITIES	-/-	1	P	RICES	
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	Salmo	nid Conservat	tion & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal	
R.	Alterna	ative 1 - 20 cfs	Bypass Pipeline	REGION:	MP	UNIT P	RICE LEVEL:	Oct-12	
Civii				FILE: H:\D8170\Common\Jetton\San Joaquin River Restoration Program\Friant Fis Pipeline or Weils\Estimates\Alternative 1\SJRRP Friant Fish Hatchery Alt 1 0 2013.xisx Sheet7					
PLANT ACCOUNT	РАУ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
	3	OCID Powerh	ouse Bypass Pipe Items;						
	ЗА	24" mortar line	d, epoxy coated welded steel pipe	8140	14,000	lbs	\$3.80	\$53,200.00	
		0.375" thick,	103 lbs/ft, 137 linear ft						
	3B	30x30x24 Stee	el Tee, Epoxy coated, HC=150 psi	8140	1	ea	\$18,000.00	\$18,000.00	
	3C	45x45x24 Stee	ei Tee, Epoxy coated, HC=150 psi	8140	1	ea	\$27,000.00	\$27,000.00	
	3D	24" Gate Isolat	tion Valve AWWA C504 Class 150	8140	2	ea	\$23,000.00	\$46,000.00	
	3E	24" AWWA Fla	inges, Class 150	8140	2	ea	\$5,200.00	\$10,400.00	
	4		ump (for Bypass tie-in) Items; cfs pump to deliver water to Friant	8140	1	ls	\$105,000.00	\$105,000.00	
		1 ' '	y during (2) Tee installations. The				V ,00,000.00	V 100,000.00	
		temporary pu	mp will be trailer mounted, placed			÷			
		along the Sar	n Joaquin River on California DFG						
	1	property, with	intakes placed directly in the						
		river. Tempo	rary piping will be run to the aera-						
		tion towers as	s the delivery location. Temporary				*		
		pump will be	required for 7 days (allows for 3						
	, ,	days per Tee	installation, sequentially placed,						
		and 1 extra d	ay for emergency/schedule slip).						
		Please see q	uote obtained from 'Rain for Rent'						
		during design	period for specific details, and						
		note the new	7-day duration. Include backup						
		generator and	d standby pump in cost.						
	5	SJR Outlet Pi	pe Demolition Items;				1		
	5A		o & remove existing 24" welded	8140	17,000	lbs	\$1.30	\$22,100.00	
			, 251 linear feet, 0.25" wall				4)	
-	5B		ng 24x24x24 off-angle Tee, keep	8140	1	ls	\$1,900.00	\$1,900.00	
			24" pipe to the abandoned mixing						
			or connection included in this work						
	5C		ng 24x30 reducer at mixing valves	8140	1	ls	\$1,900.00	\$1,900.00	
	5D		move existing concrete saddle	8140	7.8	су	\$410.00	\$3,198.00	
		blocks (5 blocks							
		1 (SUBTOTAL THIS SHEET		4			\$288,698.00	
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FEATL	San Jo	paquin River Restoration Program Fish Hatchery	PROJEC	T: Central Vall	ey Project	- California	
	Salmo	nid Conservation & Research Facility	WOID:	A029F	ESTIMAT	E LEVEL:	Appraisal
	Altern	ative 1 - 20 cfs Bypass Pipeline	REGION:	MP	UNIT PRI	CE LEVEL:	Oct-12
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PLANT ACCOUNT	РАУ ІТЕМ	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT UNIT PRICE	AMOUNT
	6	SJR Outlet to OCID Powerhouse Pipe Items;					A1
	6A	30" mortar lined, epoxy coated welded steel pipe	8140	30,000	lbs	\$3.80	\$114,000.00
		0.375" thick, 127 lbs/ft, 235 linear ft					
	6B	30x30x24 steel fitting, Tee w/ 45 degree angle,	8140	1	ea	\$18,000.00	\$18,000.00
		Epoxy coated, HC=150 psi					
	6C	New concrete saddle blocks to support steel	8140	11	су	\$2,300.00	\$25,300.00
		pipe from SJR outlet to daylight into hill slope.					
		Blocks are 12' tall, 1' deep, 3.5' wide, 20' O.C.					
	6D	Reinforcement	8140	1,650	ibs	\$2.00	\$3,300.00
	6E	Cementitious Materials (6 sack, 0.282 tons/cy)	8140	3.1	tons	\$210.00	\$651.00
	7	30" Main Pipe Trench Items;		,			
	7A	Unwatering (5 gpm pump, 4 month duration, 50%	8140	1	ls	\$13,000.00	\$13,000.00
		run-time for precipitation)					
	7B	Stripping (1' deep, native veg. & gravel)	8140	360	су	\$7.50	\$2,700.00
	7C	Common Pipe Excavation (10' deep, 2:1 in soils)	8140	860	су	\$8.00	\$6,880.00
	7D	Pipe Bedding (4" thick, select fill material)	8140	8.3	су	\$84.00	\$697.20
	7E	Compacted Backfill to 0.7 OD	8140	60	cy	\$100.00	\$6,000.00
	7F	Compacting backfill (to 90% relative density)	8140	60	cy	\$20.00	\$1,200.00
	7G	Uncompacted backfill above pipe to O.G.	8140	770	су	\$8.80	\$6,776.00
	7H	Replacing gravel surfacing (1' thick)	8140	455	sy	\$24.00	\$10,920.00
	71	Replace native topsoil from stripping, 1 foot deep		660	sy	\$2.00	\$1,320.00
	7J	(2) Reinforced concrete thrust block (7' x 7' x 7',	8140	24	cy	\$700.00	\$16,800.00
,	<u> </u>	4,000 psi min.)	51.0		",	4,00,00	\$10,000.0
	7K	Reinforcement for thrust block (150 lbs/cy)	8140	3,600	lbs	\$2.00	\$7,200.00
	7L	Cementitious material (.282 tons/cy, 6 sack mix)	8140	3.4	tons	\$210.00	\$714.00
		-1	*				
		SUBTOTAL THIS SHEET	Г				\$235,458.20
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. 5	3							
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	8	Removing Ou	itlet Pipes	8420	i i			*
	8A	Remove the t	wo 110" X 96" Flanged reducers					
		Length of eac	h reducer = 5'-5"					*
		Estimated W	eight per Reducer = 8633 lbs. (cast	iron)			9	
		Weight for 2 I	Reducer = 17300 lbs.		17,300	lbs.	\$1.30	\$22,490.00
		Procedure (fo	or each reducer, there are 2 reducer	s):				
	1		tion, unbolt existing 110" x	Í				
	\vdash		educer. Move the esiting 96"					
			alve (86,000 lbs) with existing gantry	r crane				
28			lucer and remove.					
			of fasteners removed =					. A
	 		Dia. Boits and nuts.					
	8B	Remove 18"	diameter steel pipe:					
		Length = 25	ft.					
		Wt. = 25 * 48	3 lbs./ft. = 1200 Lbs.		1,200	Lbs.	\$2.10	\$2,520.00
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			SUBTOTAL THIS SHEET	Т				\$25,010.00
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FEATU	San Jo	oaquin River i Fish Hatchery	Restoration Program	PROJECT		ey Projec	t - California		
		1 - P - 7	ation & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal	
			fs Bypass Pipeline	REGION:	MP		ICE LEVEL:	Oct-12	
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PLANT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
	9	Installing Outle	et Pines	8420	-				
	9A	Install the two							
			section: 110" ID X 96" ID						
		Estimated wt.	per reducer section = 8600 lbs.						
		Total wt. for 2	reducer sections = 17200 lbs.		17,200	lbs.	\$12.50	\$215,000.00	
		Procedure (for	r each reducer, there are 2 reduce	ers):					
		For each local	tion, Install new 110" X						
			educer. Reinstall the existing 96" aive (86,000 lbs.) with existing gantr	ry carne.	-				
		Total number	of fasteners installed =						
		120 - 2" D	Dia. Bolts and nuts.						
	10	Install straight	t steel nine:						
	10A		15 ft. @ 48 lbs/ft.		720	lbs.	\$6.00	\$4,320.00	
	10B	-	' wall, 8 ft. @ 64 lbs/ft		512		\$6.00	\$3,072.00	
	10C	30" ID X 1/4"	' wall, 40 ft. @ 80 lbs/ft		3200	lbs	\$5.00	\$16,000.00	
			SUBTOTAL THIS SHEET					\$238,392.00	
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PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
	11	Valves	,	8420			*		
	11A	2 - 24" Dia. Clas	ss 150 AWWA butterfly valves	1					
			ted, 1085 lbs. ea.		2,170	lbs.	\$10.50	\$22,785.00	
	11B	2 - 24" Dia. Clas	ss 150 Pressure reducing valves						
		Flanged ends:			5,800	lbs.	\$6.90	\$40,020.00	
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		01141	SUBTOTAL THIS SHEET				1050	\$62,805.00	
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Salmonid Conservation & Research Facility Alternative 1 - Flowmeter Region:	*				× ,	Central Vall	ey Projec	t - California	*
Alternative 1 - Flowmeter					WOID:	A029F	ESTIMA"	TE LEVEL:	Appraisal
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12 F&I Magnetic flowmeter system in the 20 cfs, 86-88410 1 L.S. \$28,000.00 \$29,000.00 24* dia, pipelines, electromagnetic flowmeters with flanged, cylindrical flow-tube, Tetzel liner, grounding rings, and remote transmitter (flowrate & totalizer) (equal to Model FM656 Tigenager as manufactureed by Sparling Instruments)	Civil				FILE: H:\D8170\Common\Jetton\San Joaquin River Restoration Program Pipeline or Wells\Estimates\Alternative 1\SJRRP Friant Fish Hatche				
24" dla, pipelines, electromagnetic flowmeters with flanged, cylindrical flowmeters with flanged, cylindrical flowmeters with flanged, cylindrical flowmeter in flowmeter a totalizer) (equal to Model FM656 TigermagEP as manufacturered by Sparling Instruments) - 24" Dla. flowmeter, approx. 860 lbs. - 24" Dla. flowmeter, appr	PLANT ACCOUNT	РАУ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
24" dla, pipelines, electromagnetic flowmeters with flanged, cylindrical flowmeters with flanged, cylindrical flowmeters with flanged, cylindrical flowmeter in flowmeter a totalizer) (equal to Model FM656 TigermagEP as manufacturered by Sparling Instruments) - 24" Dla. flowmeter, approx. 860 lbs. - 24" Dla. flowmeter, appr		12	E&I Magnetic	· flowmater system in the 20 ofs	86 69410		18	\$20,000,00	\$29,000,00
flowmeters with flanged, cylindrical flow-tube, Tetzel liner, grounding rings, and remote transmitter (flowrate & totalizer) (equal to Model FM695 TigermagEP as manufacturered by Sparling Instruments) - 24" Dia. flowmeter, approx. 860 lbs. - 24" Dia. floweter, approx. 860 lbs. - 24" Dia	-	12			00-00410		L.S.	\$29,000.00	\$29,000.00
flow-tube, Tefzel liner, grounding rings, and remote transmitter (flowrate & totalizer) (equal to Model FM656 TigemageP as manufacturered by Sparling Instruments) - 24" Dia. flowmeter, approx. 860 lbs. -			1						
and remote transmitter (flowrate & totalizer) (equal to Model FM656 TigermagEP as manufacturered by Sparling Instruments) - 24" Dia. flowmeter, approx. 860 lbs. - 2		-			1				
(equal to Model FM656 TigermagEP as manufacturered by Sparling Instruments) -24* Dia. flowmeter, approx. 860 lbs. -24* Dia. flowmeter									
manufacturered by Sparling Instrumenta) - 24* Dia. flowmeter, approx. 960 lbs. - 24* Dia. flower, a									
- 24" Dia. flowmeter, approx. 860 lbs. - 24" Dia. flower, approx. 860 lbs. - 24" Di									
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				Daivd Hulse	02/05/13			Tom Hanke	2/5/13

FEATL				PROJEC				
		oaquin River I Fish Hatcher	Restoration Program	4	Central Val	iey Proje	ct - California	
	Salmo	onid Conserva	tion & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal
	Altern	ative 1 - 20 cf	s Bypass Pipeline	REGION:	MP	UNIT P	RICE LEVEL:	Oct-12
				FILE:			Joaquin River Restoration I	Program\Friant Fish Hatchery
			Summary Sheet		2013.xisx]Sheet7	CSUMBIOS VAID	mauve 1455KRF Frank Fish	Haldlery Alt 1 02-03-
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	-	Subtotal				-		
	1	Sheet 1	•		8140	 		\$156,189.20
		Sheet 2			8140			\$288,698.00
	1	Sheet 3			8140	10		\$235,458.20
	1	Sheet 4			8420			\$25,010.00
		Sheet 5			8420			\$238,392.00
***********		Sheet 6			8420			\$62,805.00
		Sheet 7			8140			\$29,000.00
		Subtotal for 7 Mobilizatio	n	5%	+/-			\$1,035,552.40 \$52,000.00 \$1,087,552.40
4		Contract C	cost Allowances (Sum of):	20%	+/-			\$212,447.60
		Design	Contingencies, 15 % (+/-)					
		APS, 5	% (+/-). Type of procurement: I	Request for P	roposal (Assum	ned)		
		CONTRACT	COST					\$1,300,000.00
			on Contingencies	25%	+/-		,	\$350,000.00
	-		(Unit Price Level Oct 2012)	<u> </u>	1		<u> </u>	\$1,650,000.00
		Escalation	to Notice to Proceed (NTP), from			· · · · ·	ct 2015)	\$150,000.00
				at 3.0%	per year for	3.00	years	
	_	FIELD COST	(with Escalation to NTP, Price	Level Oct 201		1		\$1,800,000.00
	_	Non-Contr			+			te responsible office
		CONSTRUCT	ION COST		To b	e determi:	ned by the appropris	te responsible office
					_			,
-	ļ				1	1		L
			ropriate use and terminology, see	Reclamation	Manual, Direct			, 09-02 and 09-03.
		QUAN	ITITIES		1/6	P	RICES	0 2/0/
BY 8140 & 8	CHECKED S140 & 8420 See Previous		Jim Jetton, P.E. C.C.E				w 1/3	
-	ATE PREPARED PEER REVIEW / DATE					ATE 1/2		
See Pre			See Previous	DATE PREPARED 02/05/13 PEER REVIEW / DATE 1/5/F Tom Hanke				A 1/5/4

FEATL	JRE:			PROJECT	1:			
	San J	oaquin River i	Restoration Program			ey Proje	ct - California	
			tion & Research Facility	WOID:	A029F	ESTIM/	TE LEVEL:	Appraisal
			s Groundwater Wells	REGION:	MP	UNIT P	RICE LEVEL:	Oct-12
Civil						estimates/Alt	n Joaquin River Restoration Pro emative 2\[SJRRP Friant Fish H Sht Template	
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	Site Items:						
	1A	at V	nwatering (4-50 gpm pumps, 6	-				
			on, as-needed (20% run-time)	8140	1	ls	\$15,000.00	\$15,000.00
	1B		Exc. Unwatering (2-50 gpm pumps,	8140	1	is	\$10,000.00	\$10,000.00
			ition, as-needed (20% run-time)		•	-	1 470,000.00	0.0,000.00
	1C		eep, open field solls)	8140	500,000	су	\$1.50	\$750,000.00
	1D		nt (1/8" spray, 3x/day, road work	8140	850	Mgal	\$90.00	\$76,500.00
			62', 261 days duration)					
			et anticipated due to height of the					
			table determined using well logs					
		In the area.						
		11.0.0						
	2	Access Road						
			of (72) well access gravel roads;					
	-		3" gravel over 6" aggregate base			-	+	
			ds for Initial well drilling/setup					
	1		ent O&M needs.				 	
	-		roadway (12' wide) = 151,400 ft	04.40	4= 000			2272 222 22
	2A		way surfacing	8140	17,000	су	\$56.00	\$952,000.00
	2B	6" Aggregate I	Base course	8140	34,000	су	\$51.00	\$1,734,000.00
	<u> </u>		All B. J.		Sp.	-	 	
	3	Temporary D		04.40	00.000	2000		000.00
	3A	- ·	orary staging area for well drilling,	8140	30,000	sy	\$1.85	\$55,500.00
			setup. Each site is 50' x 75', with					
	1	(72) total wei	l sites to be installed.					
	_	Downson & M	In III Citana				+	
	4	Permanent W	ell sites are 20' x 20' with security	8140	3,200		No Costs. See 4A.	
	1		8' chain-link w/ 2' barbed-wire)	0140	3,200	sy	No Costs. See 4A.	-
	4A		o cham-link w/ 2 barbed-wire)	8140	5,800	lin A	\$52.00	\$301,600.00
	***	Fencing		0140	5,000	lin ft	\$52.00	\$301,000.00
	 							
	1		SUBTOTAL THIS SHEET					\$3,894,600.00
	<u> </u>	QUA	NTITIES				PRICES	φο ₁ 00 0 ,000.00
BY		QUAI	CHECKED	ВУ			CHECKED	/2/5/15
Jeremy I	l orbersi	1	W. Chris Duke, P.E.	Jim Jetton, F	E CCE		Bull	-4
DATE P			PEER REVIEW / DATE	DATE PREF			PEER REVIEW / DATE	10
12/07/12			W. Chris Duke, P.E.	02/05/13			Tom Hanke	2/6/15

FEATL	JRE:			PROJEC	T:	an v		
	San Jo	oaquin River F	Restoration Program		Central Valle	ey Projec	t - California	
	Friant	Fish Hatchery	1					
	Salmo	nid Conserva	tion & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal
	Aitern	ative 2 - 20 cfs	s Groundwater Wells	REGION:	MP	UNIT PR	ICE LEVEL:	Oct-12
Civil		,		FILE:			Joaquin River Restoration Primative 2\(\sumsymbol{Q}\)SJRRP Friant Fish	
PLANT	РАУ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	5	Well Drilling i	tems;					
	5A	Major work for	well drilling is shown on separate	8140	670	су	\$23.00	\$15,410.00
		cost estimate	worksheet. Line item shown is					
		to cost out ha	aul-off of drill cuttings. Assume a					
		15 mile one-v	way haul distance to disposal site.					
	6	Pipe Earthwo	rk Items:					
	6A	Common Pipe	Excavation (Varies 6' to 8' deep,	8140	1,550,000	су	\$4.70	\$7,285,000.00
		2:1 slope in s	oils)				٠	Α
	6B	 	(4" thick, select fill material)	8140	21,000	су	\$70.00	\$1,470,000.00
	6C		mbedment (6" over crown for pipe	8140	160,000	су	\$9.40	\$1,504,000.00
	ļ		7 OD for > 12" diameters) Reuse E					3
	6D	1	mbedment (to 90% relative density)	2012 10 1002	160,000	су	\$6.90	\$1,104,000.00
	6E	Uncompacted	Backfill (includes volume of	8140	1,600,000	су	\$4.50	\$7,200,000.00
	1	stripped fill, n	eplace in top 6")		+			* *
-	7	Pipe Items;						
	 		and manifold are HDPE PE 3408,					
	ļ		rated for 100 psi (AWWA M55).					
	ļ	-	m wells to well-strings to manifold					-
	ļ	· · · · · · · · · · · · · · · · · · ·	imping plant. Delivery pipe runs					
			pumping plant to delivery located chery (1.25 miles).					
					V			
×						ž.		
		×	SUBTOTAL THIS SHEET					\$18,578,410.00
		QUAN	TITIES			P	RICES	
BY			CHECKED	BY	WHILE WAY		CHECKED	d 2/4/13
Jeremy	Lorberau		W. Chris Duke, P.E.	Jim Jetton,	P.E. C.C.E	<u> </u>	Xul	Jung 1
DATE P	REPARE	D	PEER REVIEW / DATE	DATE PRE	PARED		PEER REVIEW / DAT	E 2/6/17
12/07/12	2		W. Chris Duke, P.E.	02/05/13			Tom Hanke	101.2

FEATI	San J	oaquin River F Fish Hatchery	Restoration Program	PROJEC		ey Projec	t - California			
			tion & Research Facility	WOID:	A029F	ESTIMA'	TE LEVEL:	Appraisal		
			Groundwater Wells	REGION:	MP	UNIT PR	ICE LEVEL:	Oct-12		
Civil	-			FILE:	H:\D8170\Commo	n\Jetton\San stimates\Alte	Joaquin River Restoration Promative 2\(S)RRP Friant Fish H	Joaquin River Restoration Program\Friant Fish Hatche native 2(SJRRP Friant Fish Hatchery Alt 2 02-05- ht Template		
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Pipe Items (co	ontinued):		/					
	7A		rell to well-string pipes, 6" dia.,	8140	6,300	lbs	\$3.60	\$22,680.00		
		T	bs/ft, 1875 ft total		0,000					
7	7B	1	ell-string pipes, 6" dia., DR 17	8140	33,000	lbs	\$3.60	\$118,800.0		
	1-	3.34 lbs/ft, 10		1				<u> </u>		
	7C		ell-string pipes, 8" dia., DR 17	8140	230,000	lbs	\$3.00	\$690,000.0		
		5.65 lbs/ft, 40			1 23,000			7.00,000.0		
	7D		ell-string pipes, 10" dia., DR 17	8140	2,200,000	lbs	\$2.50	\$5,500,000.00		
		8.78 lbs/ft, 25								
	7E		ell-string pipes, 12" dia., DR 17	8140	1,100,000	lbs	\$2.40	\$2,640,000.00		
		12.36 lbs/ft, 9								
	7F	 	ell-string pipes, 14" dia., DR 17	8140	600,000	lbs	\$2,30	\$1,380,000.0		
	1	14.91 lbs/ft, 4								
	7G	Telescoping w	ell-string pipes, 16" dia., DR 17	8140	780,000	lbs	\$2.25	\$1,755,000.00		
		19.46 lbs/ft, 4	10,000 ft total							
		Manifold pipes	connect from end of well-string to							
		adjacent well	string and to the booster pumping					*		
		plant at end o	of last well-string.							
	7H	Manifold pipe,	16" dia., DR 17, 19.46 lbs/ft, lengti	8140	39,000	lbs	\$2.20	\$85,800.0		
		is 2,000 ft tota	al							
	71	Manifold pipe,	24" dia., DR 17, 43.81 lbs/ft, lengti	8140	88,000	lbs	\$2.15	\$189,200.0		
		is 2,000 ft tota	al ,							
	7J	Manifold pipe,	30" dla., DR 17, 68.45 lbs/ft, lengti	8140	140,000	lbs	\$2.00	\$280,000.0		
		is 2,000 ft tota	3							
	7K	Manifold pipe,	30" dia., DR 17, 68.45 lbs/ft, lengti	8140	140,000	lbs	\$2.00	\$280,000.0		
		is 2,000 ft tota	3					,		
		Delivery pipe i	s 30" diamemter HDPE PE 3408, [OR .				2		
		26 (64 psi) th	at runs from the booster pumping							
		plant to the C	DFG Hatchery delivery point. The							
		length of the	delivery pipe is 1.25 miles.				,			
	7L	Delivery pipe,	30" dia., DR 26, 45.78 lbs/ft, length	8140	305,000	lbs	\$2.10	\$640,500.0		
		is 6,600 ft tota	al							
			SUBTOTAL THIS SHEET	г			2	\$13,581,980.0		
		QUAN	TITIES			P	RICES			
BY			CHECKED	BY	Som		CHECKED	74月13		
Jeremy	eremy Lorberau W. Chris Duke, P.E.			Jim Jettor, P.E., Q.C.E				why		
DATE P	TE PREPARED PEER REVIEW / DATE		DATE PREPARED PEER REVIEW / DATE			· ///				
12/07/1	2		W. Chris Duke, P.E.	02/05/13			Tom Hanke	13/6/13		

FEAT	San J	paquin River Restoration Program Fish Hatchery	PROJEC	A.5	ey Projec	t - California	V
	Salmo	onid Conservation & Research Facility	WOID:	A029F	ESTIMA"	TE LEVEL:	Appraisal
		ative 2 - 20 cfs Groundwater Wells	REGION:	MP		ICE LEVEL:	Oct-12
Civil			FILE:	H:\D8170\Commo	n\JJetton\San stimates\Alte	Joaquin River Restoration Pro mative 2\SJRRP Friant Fish H	gram\Friant Fish Hatche
PLANT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	8	Underground concrete storage tank:					
		Underground concrete storage tank is located at					
	1	booster pumping plant to provide storage and	1				
	1	provide suction head for the pumps. Tank is					
		reinforced concrete, depth = 24', length/width					
		= 154'. Roof, slab, and walls are 2' thick. Tank					
V		has 2' x 2' columns @ 15' O.C. Inside. Tank					
-		stores about 6 hours of water @ 20 cfs flow,					
		and has a 3.23 Million gallon capacity.	1	-			
	8A	Reinforced concrete (4,500 psi)	8140	4,800	су	\$800.00	\$3,840,000.00
	8B	Reinforcement (150 lbs/cy)	8140	720,000	lbs	\$1.50	\$1,080,000.00
	8C	Cementitous Materials (0.282 tons/cy)	8140	1,350	tons	\$200.00	\$270,000.00
	8D	9" Waterstop (in slab and walls)	8140	3,850	lin ft	\$32.00	\$123,200.00
,	9	Underground Tank Earthwork;					
	9A	Structural excavation (25' deep, 2:1 slopes in	8140	43,000	су	\$10.00	\$430,000.00
		soil, allows for 5' horizontal over-excavation	<u> </u>				
	9B	for forming and working area) Structural backfill (25' deep about tank)					
	-	Reuse Excavated Material	8140	21,000	су	\$10.00	\$210,000.00
	9C	Compacting structural backfill (to 90% rel. dens.)	-	21,000	су	\$10.00	\$210,000.00
	9D	Access hatches (3' x 3' Aluminum, Bilco-style,	8140	2	ea	\$2,500.00	\$5,000.00
	05	locking, mounted to top of tank)	0440	-		* E 000 00	£44 000 00
	9E	Access ladder (24' tall steel ladder with cage for	8140	2	ea	\$5,900.00	\$11,800.00
	9F	for fall protection, mounted into concrete walls) Security fencing (8' chain link w/ 2' barbed wire,	8140	780	lin ft	\$52.00	\$40,560.00
	91	extends 20' outside top of tank perimeter)	0140	760	INITIC	φ32.00	\$ 4 0,500.00
	9G	Access gate (double-swing gate, each gate =	8140	1	ea	\$4,500.00	\$4,500.00
	150	12' wide, chain link & barbed wire w/ wheel at	31-70		- Ca	Ψ-1,000.00	Ψ-,,σοσ.σο
		base of gate and locking hasp)					
	9H	Bollards (10' O.C. around top of tank to pevent	8140	62	ea	\$1,350.00	\$83,700.00
		vehicle loading on roof of tank, 8' tall, 4' buried)	1		-	Ţ.1,000.00	1301.00.00
		SUBTOTAL THIS SHEE	т			2.5	\$6,308,760.00
		QUANTITIES			P	RICES	
BY		CHECKED	ву	- John		CHECKED	24513
	premy Lorberau W. Chris Duke, P.E.			Jim Jetton P.E. C.C.E			
	TE PREPARED PEER REVIEW / DATE			DATE PREPARED PEER REVIEW / DATE			
12/07/12		W. Chris Duke, P.E.	02/05/13			Tom Hanke	2/6/13

FEATURE:				PROJECT:						
	San Jo	oaquin River F	Restoration Program	Central Valley Project - California						
	Friant	Fish Hatchery	:				-			
	Salmo	nid Conserva	tion & Research Facility	WOID:	A029F	ESTIMA	ATE LEVEL:	Appraisal		
	Altern	ative 2 - 20 cfs	Groundwater Wells	REGION:	MP	UNIT P	RICE LEVEL:	Oct-12		
				FILE:			n Joaquin River Restoration Pro			
Electric	al - SC	ADA			2013.xisx]Field Co		emative 2\(\subseteq \subseteq \text{RRP Friant Fish H}\) Sht Template	latchery Alt 2 U2-U5-		
PLANT	РАҮ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Site Items;		86-68450						
	10	Furnish and I	nstall:							
	10A	†	computer, monitor, keyboard,		1	ea	\$6,000.00	\$6,000.00		
	1.0/	mouse)	compator, morker, keybeard,		•	- 55	\$0,000.00	\$0,000.00		
	10B	Radio Tower	A		1	ea	\$14,500.00	\$14,500.00		
	100	~20-30 fee			•	- Ga	\$14,300.00	\$14,500.00		
	10C				1	-	\$41,000.00	£44 000 00		
	100		ftware Programming			ea	\$41,000.00	\$41,000.00		
	10D		s Point & Antenna ed 900 MHz)		1	ea	\$5,500.00	\$5,500.00		
	11	3" Diameter P	ipe items (well to manifold);	86-68450						
	ļ	Furnish and I	nstail:				ļ			
	11A	Radio - Remot	e I/O & Antenna		75	ea	\$3,100.00	\$232,500.00		
	11B	Antenna Pole			75	ea	\$1,300.00	\$97,500.00		
		(Assume 10-20 ft wooden pole)						· · · · · · · · · · · · · · · · · · ·		
+										
					3					
		Misc. Items			20	%	Included in Items Abov	е		
			N 10-							
			ALIPTATAL THE ALI							
		CULAN	SUBTOTAL THIS SHEET				PICES	\$397,000.00		
QUANTITIES				nv –	//		PRICES	- 12/2		
BY CHECKED Jason Schmidt Paul Tinetti				Jim Jetton, P.E., C.C.E				to free to		
	REPARI	=n	Paul Tinetti PEER REVIEW / DATE	DATE PRE		_	PEER REVIEW / DATE	10		
12/14/12			V. Hoan 12/14/12	02/05/13 Tom Hanke 2/6//3						

FEATURE:				PROJECT:						
£	San Joaquin River Restoration Program Friant Fish Hatchery Salmonid Conservation & Research Facility			Central Valley Project - California						
				WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal		
	Alterna	ative 2 - 20 cfs	s GW Booster Pumping Units	REGION:	MP	UNIT PE	RICE LEVEL:	Oct-12		
						Estimates\Alte	n Joaquin River Restoration Prog emative 2\SJRRP Friant Fish Ha Sht Template			
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		FURNISH ANI	D INSTALL:							
	12	2 - Sulzer Purr	np model SJM-20MS, 1-stage,	86-68420	2	ea	\$195,000.00	\$390,000.00		
		880 rpm, v	ertical mixed-flow pump,							
		Rated 20.6	6 cfs (9,246 gpm) @ 35 feet TDH,							
		oil-lube line	shaft, 19' long - 20" diam. column							
	1.0	pipe assen	nbly & 20" diam. above-deck							
		discharge	discharge head							
		(6,000 lbs	each , 12,000 lbs total)							
		- cast-iron	bowls w/ stainless steel impellers							
		and bow	and bowl liners							
		- stainless steel shafts (bottom, li								
		- fabricate	d steel above-deck discharge head				11.1			
		- pump vit	oration limits at Hydraulic Institute							
		Standar	ds							
		- non-witn	essed certified pump shop test		*			Ų.		
		- pump sh	op testing with job motor	11						
	13	2 - 125 hp. 900	0 rpm, TEFC, 50-deg. C, vertical	86-68430	2	ea	\$23,000.00	\$46,000.00		
		1	notor, normal thrust, solid-shaft,				,			
			47VP frame, "Premium Efficiency",							
	3 ph/60 hz		ph/60 hz/460 volt							
			each, 4,600 lbs total)							
,										
			SUBTOTAL THIS SHEET					\$436,000.00		
		QUAN	ITITIES		11	P	RICES			
BY CHECKED				BY /	- HE BOOM		CHECKED	2 42/5/12		
	R. Zel	enka	Toby Tumage 1/8/13	Jim Jetton, I	E., C.C.E) 	Sinte	1-23		
DATE P	REPARE	:D	PEER REVIEW / DATE	DATE PRE			PEER REVIEW / DATE	110		
				02/05/13	- ////7					

FEATURE:			PROJECT:							
	San Joaquin River Restoration Program			Central Valley Project - California						
	Friant	Fish Hatchery)			1			
	Salmo	onid Conservation & Research Facility	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal			
	Altern	native 2 - Pumping Plant	REGION:	MP	UNIT P	RICE LEVEL:	Oct-12			
Hydrau	Hydraulic Equipment Group				Estimates\Alt	n Joaquin River Restoration Pro ernative 2\SJRRP Friant Fish H Sht Template				
, 5	3						,			
PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT			
		Steel Manifold	8420							
		FURNISH-AND-INSTALL THE FOLLOWING:								
	14	Steel Pipe					-			
	14A	2" Standard (=Sch. 40), L = 8 ft, Wt. = 5.5 lbs/ft	8	44	lbs.	\$16.50	\$726.00			
	14B	20" O.D., Sch. 10, L = 45 ft, Wt. = 53 lbs/ft		2,385	lbs.	\$5.00	\$11,925.00			
	14C	24" O.D. Sch. 10, L = 20 ft, Wt. = 64 lbs/ft		1,280	lbs.	\$5.00	\$6,400.00			
	15	AWWA Class 150, Motor-Operated								
		Butterfly Valves								
	15A	2 - 20" Dia. Valve, 1085 lbs with motor		2,170	lbs.	\$15.00	\$32,550.00			
	16	ANSI Class 150, Tilting Disc		,	4					
		Check Valves								
	16A	2 - 20" Dia. Valve, 1685 lbs		3,370	lbs.	\$14.00	\$47,180.00			
	17	300 psi, Combination air valves								
		(APCO bulletin 623 model 145C)								
	17A	2 - 2" Dia. Valve, 75 lbs		150	lbs.	\$16.00	\$2,400.00			
	18	300 psi, Throttling air valves								
		(APCO bulletin 586 model 144DAT)					-			
8	18A	2 - 2" Dia. Valve, 50 lbs		100	lbs.	\$32.00	\$3,200.00			
	19	Ball valves, threaded, full port, bronze,								
		600 psi cold-water								
	19A	4 - 2" Dia. Valves, 6.7 lbs		27	lbs.	\$200.00	\$5,400.00			
	SUBTOTAL THIS SHEET					l l.	\$109,781.00			
QUANTITIES				PRICES						
BY Ken Sm	nith	CHECKED Lucas Adams	BY /	Jim Jetton, P.E., S.C.E			135/3			
	PREPAR						111			
01/08/1	3	PEER REVIEW / DATE Lucas Adams 1/8/13	02/05/13	an 7.//						

FRIANT FISH HATCHERY WATER SUPPLY ALTERNATIVE 2: DEEP WELLS IN GRANITE							ct - California			
		Appraisal E	stimate	WOID:	A029F	ESTIMA	TE LEVEL:	Appraisal		
		Assumed to	p of Aquifer Unit 500 feet bgs	REGION:	MP	UNIT PI	RICE LEVEL:	Oct-12		
1 Well					FILE: H:\D8170\Common\JJetton\San Joaquin River Restoration Program\Friant Fish Hatch Pipeline or Wells\Estimates\Alternative 2\(\s\)SRRP Friant Fish Hatchery Alt 2 02-05-2013.xisx\]Field Cost Summary Sht Template					
PLANT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
he following quantities are for 1 well. There are 72 wells in the			well field. S	See Summary	Sheet for	cost of 72 wells.				
	20	SITE PREPAI	RATION	8320						
	20A	Site Preparation	on: Mobilization of Equipment		- 1	LS	Included in Summary			
	20B	Site Preparation	on: access improvements, leveling		1	LS	\$8,500.00	\$8,500.00		
		drill pad, c	onstructing mud pit, constructing or							
		improving	discharge facilities, stockpiling							
		excavate r	materials	1						
	20C	Site Preparation	on: Demobilization of Equipment		1	LS	Included in Summary			
	21	PUMPING WE	ELL INSTALLATION	8320						
	21A	Mobilization of	f Drilling Equipment: drill rig, suppor	t	1	LS	Included in Summary			
		equipment	t and vehicles, materials, ancillary							
		materials a	and facilities							
	21B	Drilling surface	e casing borehole, 14" diameter		3.00	LF	\$310.00	\$930.00		
	21C	Set Surface C	asing; Mild Steel, Schd 10, 14" dian	neter	6.00	LF	\$360.00	\$2,160.00		
		0.250 wall	thickness; includes cost of labor,							
		etc.						,		
	21D	Surface Casin	ig cement (Includes 3' stickup)		2.16	FT³	\$250.00	\$540.00		
	21E	Drilling well bo	orehole, 8" diameter ; includes cost		715.00	LF	\$75.00	\$53,625.00		
		of samplin	g, temporary conductor casing,					14		
		labor, sam	ple storage, sample handling, etc.							
	21F	Install wells, 8	dlameter; - includes cost of		1	LS	\$12,000.00	\$12,000.00		
		labor, drill	rig, centering guldes, etc.					¥.		
	21G	Blank Casing,	8" Dlameter: Galvanized Steel,		300.00	LF	\$47.00	\$14,100.00		
		(includes	3' stickup)					*		
	21H	Locking Mild S	Steel Surface Cap, 14" diameter		1	EA	\$260.00	\$260.00		
	211	Well developm	nent (air lift or pumping)		, 1	LS	\$19,500.00	\$19,500.00		
		4 mins mli	n development per foot of open hole				2			
	21J	6" dlameter su	ubmersible pump or equivalent		1.00	EA	\$15,000.00	\$15,000.00		
		Grundfos	150S300-15, 30 HP, Nominal							
	21K	Riser Pipe/Co	nductor, Sch 40 SS or equivalent		680.00	LF	\$77.00	\$52,360.00		
	<u></u>		SUBTOTAL THIS SHEET					\$178,975.00		
QUANTITIES				L	///	P	RICES	5 121 - :		
BY .			CHECKED	BY.	w Jah		CHECKED	215/13		
V. Robe	rt Talbo	t, 86-68320	John Earle 11/30/2012	Jim Jetton,			Ne	=17		
ATE P	REPAR	ED	PEER REVIEW / DATE	DATE PRE	ARED		PEER REVIEW / DATE	21/12		
				02/05/13			Tom Hanke	0/0/12		

FEATURE:				PROJECT:						
			HERY WATER SUPPLY EEP WELLS IN GRANITE		Central Vali	ley Proje	ct - California			
				WOID:	A029F	ESTIM/	ATE LEVEL:	Appraisal		
					MP	4	RICE LEVEL:	Oct-12		
		1 Well		REGION: FILE:	H:\D8170\Commo	Estimates\Al	in Joaquin River Restoration Pro ternative 2\SJRRP Friant Fish H v Sht Template	gram\Friant Fish Hatche		
PLANT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
The foli	owing q	uantities are fo	r 1 well. There are 72 wells in the	well field.	See Summary	Sheet for	r cost of 72 wells.			
	22	AQUIFER TE	STING (PUMPING)	8320						
	22A	Aquifer Step 1	Fest, includes cost of monitoring/rec	ording	1	LS	\$10,000.00	\$10,000.00		
		equipmen	t, data collection, analysis and repor	ting; mlnlmu	ım					
		testing du	rations (hrs). 16 Pumping 24 Reco	very						
	22B	Aquifer Const	ant Rate Test, Inclds cost of monitor	ing/logging	1	LS	\$14,500.00	\$14,500.00		
- 10		equipmen	t, data collection, analysis and repor	ting; minimu	ım					
		testing du	rations (hrs). 72 Pumping 48 Reco	verv						
	22C		Testing: includes cost of sampling r		1	LS	\$1,100.00	\$1,100.00		
	-	<u> </u>	offection, shipping, analysis, and repo			1	41,100.00	41,100.00		
	22D		stem (estimated) - includes settling t		1	LS	\$5,100.00	\$5,100.00		
	1220		flow valves, flow meters, sampling p		<u> </u>	 	\$0,100.00	φο, 100.00		
-	-	-	point protection, etc	JOILU,						
	005			l nne	1	LS	1-1-1-1-004 000	#0.00		
1	22E		cessary generators, wiring, connection in the co			100	included in 22A-22D	\$0.00		
		develop, a	and test PW and OWS (as needed),							
		Conduct (Constant Rate Test.							
	23	DEMOBILIZA	TION	8320			+			
	23A	-	n: includes cost to demob drill rig.	0320	1	LS	Included in Summer.	\$0.00		
	ZJA			L		1 13	Included in Summary	\$0.00		
			quipment, removal of all equipment a				 			
	+		mob and demob of equipment nece			-				
			e/reclaim the site, abandon wells (as	i 			1	* ***		
		necessary	y), and site reclamation							
	24	CONTRACT	ADMINISTRATION	8320						
	24A	Contract Clos	e-out: reports, logs, maintenance re	cords	1	LS	Included in Overheads	\$0.00		
		and sched	dules, as-builts, etc.							
	24B	Meetings, site	e visits, debriefings, etc.		1	LS	Included in Overheads	\$0.00		
	SUBTOTAL THIS SHEET							\$30,700.00		
		QUA	NTITIES			[PRICES			
BY CHECKED				BY	NUN		CHECKED	245/12		
	ert Talbo	t, 86-68320	John Earle 11/30/2012		P.E. C.C.E		Sal	in you		
	REPAR		PEER REVIEW / DATE	DATE PRE			PEER REVIEW / DATE	10		
*			**		11112					
11/29/12 Leslie Stone 12/04/2012 0			02/05/13 Tom Hanke 2/6/13							

FEAT	JRE:			PROJECT:						
		oaquin River I Fish Hatcher	Restoration Program y	Central Valley Project - California						
-	Salmonid Conservation & Research Facility Alternative 1 - 20 cfs Bypass Pipeline Summary Sheet				OID: A029F ESTIMATE LEVEL:			Appraisal		
					MP	UNIT P	RICE LEVEL:	Oct-12		
						Estimates\Alte	n Joaquin River Restoration Pro emative 2\[SJRRP Friant Fish H Sht Template			
. 5	2									
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
	-	Subtotal								
		Sheet 1		8140				\$3,894,600.00		
		Sheet 2		8140				\$18,578,410.00		
-	1	Sheet 3		8140				\$13,581,980.00		
		Sheet 4		8140				\$6,308,760.00		
		Sheet 5		8450				\$397,000.00		
		Sheet 6		8430	1			\$436,000.00 \$109,781.00 \$12,886,200.00		
		Sheet 7		8420	1					
		Sheet 8	For 1 Well	8320	72	EA	\$178,975.00			
		Sheet 9	For 1 Well	8320	72	EA	\$30,700.00	\$2,210,400.00		
		Subtotal for 7	72 Wells					\$58,403,131.00		
		Mobilizatio	on .	5%	+/-			\$2,900,000.00		
		Subtotal with	Mobilization					\$61,303,131.00		
		Contract C	Cost Allowances (Sum of):	20%	+/-			\$12,696,869.00		
		Design	Contingencies, 15 % (+/-)	1.						
ACTION NAME AND ADDRESS OF THE PARTY OF THE		APS, 8	5 % (+/-). Type of procurement: F	Request for P	roposal (Assun	ned)				
	9	CONTRACT	COST					\$74,000,000.00		
		Constructi	on Contingencies	25%	+/-			\$18,000,000.00		
×			(Unit Price Level Oct 2012)					\$92,000,000.00		
		Escalation	to Notice to Proceed (NTP), from	Unit Price Le	evel (Oct 2012)	to NTP (O	ct 2015)	\$8,000,000.00		
				at 3.0%	per year for	3.00	years			
		FIELD COST	(with Escalation to NTP, Price L	evel Oct 201	5)			\$100,000,000.00		
		Non-Contract Costs			To be determined by the appropriate					
	*	CONSTRUCT	TON COST	-	To b	e determi	ned by the appropriate	responsible office		
	<u> </u>	The survey of th	ropriate use and terminology, see	Reclamation	Manual, Direc	A	and the state of t	9-02 and 09-03.		
		QUA	NTITIES		///	F	RICES			
BY See Pre	BY CHECKED See Previous See Previous				P.E. O.C.E		CHECKED	7. of 2/5/3		
		ED	PEER REVIEW / DATE	DATE PR		v	PEER REVIEW / DA	E		
DATE PREPARED PEER REVIEW / DATE See Previous See Previous				02/05/13						