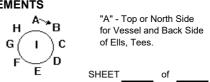
Inspection Type:	Cert. □ Cert.	Ext. ☑	Intl. 🗆	On-Stream	n 🗆	IRC#	IC1 🗆	IC2 □	Other ☑
Insp. Intervals: (yrs)	Ext	Intl.	_					_	
Area Rocl		FMT	Picean	ice	Fac	ility		ilson Cree	
Equipment #	V-ST-002		EAM #			Stat	te #	_ P&ID #	8195-01
Vessel Name, Descr	-	Sulfa Trea	at Tower (1			~ ~ ~			
Service	Gas		_	PSE#		ST-2			
Status (A,I/A,O/S) A	` ′		_	E Capacity	166	1 SCFM			
		orrosive Yes	-	urst Press.	2411.3.5	200 ps	<u>1g</u>		
Vibration No		or liner No	_	nal Access	24" Mar	ıway			
Does Internal Inspec	ction Require P	rocess Shut-Ir	1?	No					
Manufacturer	McKay Equi	ipment Compa	ny	NB#	2	336	Serial #		MK-2345
Fab. Date	ab. Date Volume (ft.³)			gal.)	Mi	n. Flange	Rating 150	# Orio	entation (H/V/S) \ \
Seamless? No	Insulated?	es Stress	Relieved	?F	RT (S/F/N)	Full	RT Type (1,2,3	4,Unk)	RT-2
PRESS. & TEMP	Docian	Operation	a DEG	SIGN DATA		hell	Head	Λ	Head B
Temperature (°F)	Design 200 F	Operatin 100 F		eel Grade		516-70	SA-516		SA-516-70
Pressure (psig)	200 F 200 psig	200 psig		eei Grade sign Thick.		510-70	.500		.500"
Hydrotest (psig)	260 psig	MDMT		orr. Allow.		25"	.125		.125"
Seam-Seam Length		25'-0" S/S		om. Shape		Cylinder	2:1 El		2:1 Ellip
Outside Diameter (in		60"		t. Efficy.		00%	100%		100%
Comments (Re-rated, De		vly installed in		-	1'	0070			10070
Certification Informa	ation: API 510	☑ Natio	nal Board	□ C	ert #:	3088	88 Exp.	Date:	2016-07-31
Company	DBI, Inc.	Signature		Mi	tchell Be	enes	D	ate:	2013-11-05
Chevron Review /Sig	gn Off / Action I	tems:							
Certification Informa	ation: API 510	□ Natio	nal Board	□ C	ert #:		Fyn	Date:	
			200.0	_					
Company		Signature					L	ate:	

PRESSURE VESSEL THICKNESS MEASUREMENTS

(inches)



SHEET ____ of ____

AREA_		Roo	ckies		FMT		W	ilson Cı	reek					
FACILIT	Υ	Wil	ckies son Creek (Gas Plan	t	EQU	JIP. NO.		V-ST	2	EAM	l #	J48GPP	V 6
LOCATI	ON					 s	STATE. N	IO. 79 A	006470	9 INSUL	 .ATED Y	ES☑ N	10 º	6 100
DESCR	IPTION		Sulf	a Treat	Tower #	2		UT T	HRU CO	 DATING	YES⊡	NOD N	IA□ MII	_S
	/ 1 1 O 1 V 1 W 1		01 - 111		, , , , , , , , , , , , , , , , , , ,			урслости		DIVIS	0700111	301212	0103	
			<u>0.500"</u> Ma											30 F
			DA 590	T	ransduc	er Size /	Freq. / S	erial #			3/8" / 5N		<u> </u>	
Design	LOC.	COMP.	MATL.		NOM.	Α	В		D	Е	F	G	Н	ı
Press.		TYPE	MATL.	SIZE	THICK	01	02					07		09
200	H1		SA-516-70											
200	C1 C2	Shell Shell	SA-516-70 SA-516-70		0.500"						0.499"		0.496"	
200	C2	Shell	SA-516-70 SA-516-70		0.500"			0.492"					0.496"	
200	C4	Shell	SA-516-70		0.500"	0.490"	0.497"			0.492"	0.494"	0.494"		
200	C5	Shell	SA-516-70		0.500"			0.491"			0.491"		0.490"	
200	C6	Shell	SA-516-70	60"OD	0.500"	0.496"	0.494"	Noz	0.495"	0.490"	0.494"	0.495"	0.497"	
200	H2	Head	SA-516-70	60"OD		0.488"		0.491"				0.491"	0.483"	
200	N1	Noz	SA-106B	4"		0.424"		0.420"		0.422"		0.429"		
200	N2	Noz	SA-106B	4"		0.423"		0.425"		0.403"		0.418"		
200	N4 MW1	Noz Noz	SA-106B SA-106B	4" 18"	0.438"	0.421" 0.506"		0.438"		0.433" 0.536"		0.426"		
200	MW2	Noz	SA-106B	24"	0.500"			0.683"		0.697"		0.502		
200	171 77 2	1102	5A-100D	24	0.300	0.000		0.005		0.077		0.710		
			-							}	}		\vdash	
			 											
									_					
														
COMM	ENITO:										<u> </u>			
COMM	⊏IN I 2;													
D :	4"								· · · · · · · · · · · · · · · · · · ·					
Procedu	ure #'s							R	lev #'s_					
Compar	ny			Sig	nature						Date:			

Next UT Inspection: 2018-11-04 API 510 para. 6.4

Next Visual Inspection: 2018-11-04

					Short Term	Long Term	Remaining	Minimum					
												Life	Required
	TNom	A	В	C	D	E	F	G	Н	Rate	Rate	(Years)	Thickness (In)
H2	0.500	0.486	0.493	0.487	0.485	0.486	0.473	0.489	0.492				0.339
H1	0.500	0.488	0.490	0.491	0.492	0.494	0.491	0.491	0.483				0.339
C1	0.500	0.494	Noz	0.494	0.495	0.488	0.499	0.498	0.496				0.341
C2	0.500	0.491	0.489	0.483	0.486	0.488	0.488	0.487	0.490				0.341
C3	0.500	0.495	0.497	0.492	0.494	0.492	0.486	0.495	0.496				0.341
C4	0.500	0.490	0.497	0.494	0.488	0.492	0.494	0.494	0.489				0.341
C5	0.500	0.494	0.494	0.491	0.490	0.486	0.491	0.493	0.490				0.341
C6	0.500	0.496	0.494	Noz	0.495	0.490	0.494	0.495	0.497				0.341

^{**}The corrosion rate and remaining service life will be determined after the next scheduled inspection due to the recent in-service date of the vessel. The vessel meets the minimum required thickness at this time.

Data Plate the Data Plate Intact and Legible?	Yes	No		
_		INO	NA	Comments:
	V			Yes
ata Plate information matches report? If not update report.	V			Yes
re Repair Tags installed ? - If so date of Repair			V	No repair tags
cture or rubbing of nameplate and repair plates?	V			Digital picture taken
Access			•	
there sufficient access for Inspection?	V			Yes
adders and walkways and landings in good condition?	\checkmark			Yes
afety cages installed as required?	V			Yes
rop bars installed and in working condition?			Ø	No drop bar is installed at platform
anway large enough for vessel entry?	V			Yes manway is 24"
Supports / Foundation			•	
orrosion on supports? Light/Moderate/Extreme/ Location?	V			No corrosion noted
stortion noted supports? Location and extent?	V			None noted
tuds, bolts or nuts missing, loose or wrong size?	✓			None noted
racking, corrosion or damaged noted on welds?	✓			None noted
ny cracking or spalling of concrete supports?	V			None noted
re there any settlement issues?	V			No settlement issues noted
equipment level?	V			Appears level visually
Fireproofing / Insulation			•	**
reproofing cracked, damaged or missing?			V	No fireproofing on vessel
sulation damaged, missing or bulging? Location / Extent?	V			None noted
re seams turned down to prevent H2O ingress?	✓			Seams are turned down
insulation sealed properly - caulking / sealant?	V			Insulation seal is in good condition
ossible corrosion under insulation? Location?	✓			None noted
spection plug loose or missing? Locations?	✓			None noted
banding loose, missing or damaged?	V			None noted
Insulation marked as Asbestos?			☑ .	Vessel is non-asbestos insulation
artially Insulated? Identify areas?	V			Shell is 100% insulated; Heads are un-insulated
Leaks / Temporary Repairs			•	21011 10 10070 1110010000, 120000 010 011 111001000
eaks noted on shell, heads, nozzles or attached piping?	V			None noted
iscolored or sagging insulation?	V			None noted
re there existing temp repairs - clamps, lap patches?			☑ .	No temporary repairs
ocations noted on drawing?			✓.	No areas of concern
Shell / Heads			•	
xternal coating failed? Extent and location?	V			No coating failure noted
eformation, bulging, blisters, dents? Extent / Location?	V			None noted
xternal Corrosion? Light / Moderate / Extreme / Location?	V			No corrosion noted
racking, corrosion or damage noted on welds?	✓			None noted
ot spots or discolored areas noted on equipment?	v V			None noted
Nozzles / Auxiliary Piping	v		Ь.	Trong noted
pose or missing studs, nuts? Correct size?	V			None noted
cessive corrosion noted on bolting?	☑			No corrosion present
ultiple gaskets or "other" used as spacers?	☑			None noted
ange connections taped over - trapped moisture?	☑			None noted
	☑			None noted
	ت			THORE HOLEU
istortion to nozzles or piping noted? 'eep holes in repads leaking or plugged?	V			None noted; shell repads covered in insulation

Corrosion Definitions - Light = Surface Rust, no scaling or pitting. Moderate = Pit depth less than corrosion allowance / Light scaling. Extreme = Pit depth greater than corrosion allowance / Heavy scaling.

External Inspection Check List - Continued													
Vessel Skirt	Yes	No	NA	Commen	ts:								
Are there access holes in vessel skirts?	V			Yes 4 tombstone shaped	d holes noted								
Distortion or damaged noted? Extent and Location?	V			None noted	l								
Corrosion or cracking noted? Extent and Location?	✓			None noted	1								
Skirt free of trash and debris?	✓			Skirt is free from large to	rash or debris								
Auxiliary Equipment			_										
Vessel has sight glass and temperature gauge?			abla	No sight glass or temperate	ure gauge found								
Sight glass and gauges functioning properly - legible?			abla	No sight glass or temperate	ure gauge found								
Broken conduit or wiring noted?	V			None noted	1								
Adequate lighting installed and functioning?	\checkmark			Lighting is adec	quate								
Relief Valves			_										
Relief valves have test tag? Date?	✓			Sep-13									
Padlock or 1/8" - 3000 # cable used to lock open valves?	✓			Correct									
Block valves up stream of relief valves locked open?	✓			Correct									
Block valves down stream of relief valves locked open?	V			No down stream valves a	fter psv outlet								
Piping down stream of PSV is not reduced in size?	V		_	Correct 2" open to at									
No check or control valves downstream of relief valve?	✓		_	Negative	*								
No liquid traps in relief piping?	V		_	Negative									
Grounding			-										
Ground cable broken, missing and or disconnected?	✓			Ground connection	n is tight								
Containment / Drainage			_		<u> </u>								
Drainage sufficient at base of equipment			abla	No containme	ent								
Is equipment located within containment?			<u> </u>										
Containment in satisfactory condition?			✓										
Containment drained of excessive liquid?			✓										
Containment free of debris?			✓										
Other			_										
All NDE data reviewed? Issues or concerns?	✓			Yes - no concerns at	this time								
Minimum thickness calculations complete? Concerns?	✓			Yes - no concerns at									
Remaining life calculation complete? Concerns?	✓			Yes - no concerns at									
Fixed Equip Specialist notified of issues and concerns?			✓	2 22 222 2 222 2 2									
Timou Equip operation fromtion of locates and concerns.			_										
Other NDE Performed: UT ☑ MT □ PT □	RT 🗆 🚜	AUT 🗆	PAUT	□ Type and Other									
Notes: UT thickness measurements taken externally.													
Certification Information: API 510 ☑ National Bo	ard 🗆	Cert	#:	30888 Exp. Date:	2016-07-31								
Company DBI, Inc. Signature		Mitch	ell Benes	Date:	2013-11-05								

Photo Inspection Report





V-ST-002

Skirt





Nameplate

N3



MW2

FURIN U-1A MAINUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only) As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufa	actured and co	ertified I	by:		Mo	KAY EOU	IPMENT	COMPAI	NY	633	7 WESTM			ESSA.		79764
2. Manufa	actured for:				(Name and address of manufacturer) CHEVRON 1400 SMITH, 41 ST FLOOR HOUSTON, TEXAS 77002											
3. Locatio	n of installation	on		CH	(Nome and address of purdaser) HEVRON 7265 RIO BLANCO COUNTY ROAD #9 MEEKER, COLORADO 81641											
4. Туре:	VERT			MK-2												2013
	(Horizontal or vert	tical tank)	(Manu	facturer's	serial Numi	ber) (C	RN)	(I	rawing no	umber)		(National 8	oard number)		(Ye	ear built)
5. The che CODE T	mical and phys The design, con	ical prop struction	erties on, and v	of all pa	arts meet anship co	the requir	ements o SME Rule	f materia s, Section	specifi VIII, (catio Divisio	ns of the A	SME BOIL		010	VESSE	il
to											-					
6. Shell						.500		de Case numb	.12	5		5'-0	(Special S	ervice per U	G-120 (d)] 2	5'-0"
7. Seams:	Material spec.	number, grad	de)	FL	JLL	Nominal thicknet 100	255		(Corr. all	OW)	T	(Inner	diameter) S	POT	100	th (oversi)
	(Long (welded	l, dbí. singl., is	op, but())	R.T. (spot or full)	(EIT.)	(H.T. t	emp.)	(Time, hr)	1	(Girth (wekled, d	bi. singl., lap, be	402 (R.T	(spot or full)}		%) No. of course
8. Heads:	(a) Material			S	A-516-7 oc. number, gr	O ade)		_ (b) M	aterial	-			SA-516-7 (Spec. number, 9			-
	Location (Top,		imum		rosion	Crown	Knuc		liptical		Conical	Hemisph		lat		to Pressure
(a)	Bottom, Ends) TOP		kness 194		wance 125	Radius	Rad	-	Ratio 2:1	AD	ex Angle	Radiu		neter		x or Concave) ONCAVE
(b)	BOTTOM	.4	194		125	-			2:1					-		ONCAVE
If removable	e, bolts used (d	describe	other fa	astenin	gs)						Material spe	number	grade, size, n	umbar)		
9. MAWP		200					at max	temp.		,,	200	c. number,	grade, Size, ii			
Min de		nternal)	-20		(External			Hudeo	one		(Internal)	act measur	100	(Exten		
Min. design metal temp. <u>-20</u> at <u>200</u> Hydro., pneu., or comb. test pressure <u>260</u> Proof test <u></u>																
	s, inspection,	and sat	fety va	lve or	enings:											
	pose		Diam or Siz		-		Material Nozzle Thickness Reinforcement Nozzle Flange Nom. Corr. Material						Attachmer			Location
(Inlet, Outlet	LET	No.		že !"	Type RFWN	SA-106B		Nom. .438		T. 25	INHE		Nozzle UW-16.1(c)	Flans		(Insp. Open. SHELL
	TLET	1		77	RFWN	SA-106B		.438		25		RENT	UW-16.1(c)			SHELL
	AIN	1		"	RFWN			.438	,12			RENT'	UW-16.1(c)	TYPE		HEAD
	LIEF	1	1	050	RFWN	SA-106B SA-106B		.500		25		RENT 16-70	UW-16.1(c) UW-16.1(c)			HEAD HEAD
	WAY	1	2		RESO	SA-106B		.500	.125			16-70	UW-16.1(c)			SHELL
		~				I				-						
11. Suppo	rts: Skirt	YE (Yes or		L	ugs	(No.)	Leg	5	(No.)	_ (Others _	(Descr		Attach		H-WLD
12, Remark	ks: Manufactur			Repor	ts proper		ed and sig	ned by C		ionec	1 Inspector			for the		here and How
	of the report:				CYLIND	ER	WAGNE	R PLATE	WOR	KS	"ປ" :	32396	S/N:			
	EXEMPT PER	UG-20	rn uc	5 66		part, item nu DPER UG					fying stamp) ERVICE	CHE	VRON PO#	100111	70045	
			.,,			D I LIV OC		1401		TIL O	LICEL	CITE	TON TO	COLLI	70013	
				CE	RTIFI	CATE (OF SHO	P/FIE	LD C	OM	IPLIAN	CE				
We certif	fy that the state	ments n	ade in	this re	port are	correct and	I that all o	letails of	design	. mat	erial cons	truction a	nd workma	nshin o	f this v	eccel
	to the ASME I												rization Nu			25465 /
expires	03/20/20	015										1		_		,
Date	7-23-	13 0	Co. Nan	ne	McKAY	7 ЕОПТРИ	FNT CO	MPANY	S	igned	4			1	ni	
				*****		(Manufac					-	S	(Re	presenta	tive)	Cox
								OP/FII	ELD I	INSI	PECTIC					
	constructed by					NT COMPA		at		10			SA, TEXAS		-	
i, the un	idersigned, holi Texas	aing a v	and co	mmiss	ion issue iyed by	d by the N	ational B	oard of E	oiler a	nd Pr		ssel Inspe BCT	ctors and/or	the Sta	ate or P	rovince of
have ins	spected the con	nponent				ufacturer's	Data Re	port on				3-1	?	-	an	d state that,
to the b	est of my know	dedge ar	nd belie	ef, the	Manufac	turer has c	constructe	d this pr	essure v	esse!	l in accord	ance with	ASME Bo	iler and	Pressu	re Vessel
Code, S	lection VIII, Di	vision I	. By sig	gning t	his certif	ficate neith	ner the Ins	spector n	or his/b	er en	nployer ma	akes any v	varranty, ex	pressec	or	
	, concerning the liable in any m															
				161	a injury	or propert	70/	,				OLI OI COL	niccied with	uus in	speciic	a.
Date	-23-13	Sig	gned (au	1/		m	Con	nniss			CA TI			eters de l'est L <u>a poè</u> ne de l'est
					(Author	rized Inspect	tor)				[National I	Board (incl.	endorsement) State,	Prov. ar	d number]

A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

							i lile /	Citiz	- 0000	11010	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, _			-		
Manufactured a	no cen	tified by	WAGNER	PLATE	WORKS, J	1C 414	2 W 49	9TH S	SIREEL	TI	JI.SA_OKI	AHOMA	74107				
Manufactured for	or B	McKAY E	QUIPMEN	r comp	ANY	6	337 W		ne and ad		of Manufac	turer) DESSA, T	X 79764				
									d address								
3 Location of inst.	lation	UNKN	NWOI						(Name an	d add	race)						_
			The second second														
4 Type	\c news	stien a () a a		ELL						366-				ICR			-
1,0	vescut	mon or ves	sei part (she	ii, two-piet 13-36		e bundle))			(Mfg's		NPW			(CR		013	
(Nat't	Bd. N	0)		(Drawin					(0)		prepared !	nv)				ar built)	
5. ASME Code, S	ection	VIII, Div. 1		,	2010 -	2011			10		-	-17			NA		
			Part Branch Marrier	Editi	on and Adde)	eran variable and		Co	de Case No	1.	Spe	cial Serv	ice per Ut	3-120(d)	
6. Shell (a) No	of con	urse(s):		3			(6) (0)	inrati k	ength (ft 8	in V			25' -	0"			
,	se(s)	3.00(0).	T	laterial	1	Thickness		T COUNTY	Long Jo	-	'at A'	T Circum	n Joint (Cat. A) He	at Treatn	7635
No. Diameter		nath, ft & ir		rade or T	me Nor		Corr.	Тур				Type	Full Spot No	ne Ef			rin'
1 60" O.D		5' - 0"		516 Gr70				1	F	ULL	-	1 1	SPOT	-			
2 60" Q.D	+-	10' - 0"	SA-	516 Gr70	1/2	2"	-	1	F	ULL		1	SPOT		<u> </u>		
- I							-	1		-		1 - 1		:			
7. Heads. (a)		(Mat'l S	pec. No., Gr	ade or Tyr	OUT TO	no 2 Tam		-	(b) _		(Mart)	Spec No.	Grade or Typ	TH (e	Time & T	ėmt	-
Location (T	ср.	Thickr			dius	Elliptical	Coni	ical 1	Hemisphe	erical	Fiat		Pressure		Cateo		-
Bottom, En		Min	Corr	Crown	Knuckle	Ratio	Apex A		Radiu		Diameter	Convex		Type	Full, Sp		1
(a) -					-	-	-						 				-
(b) -			- 1		<u> </u>	-	1 -					<u> </u>	<u> </u>		<u></u>		L.
f removable, bolts	usea (describe of	ther tastenir	9]					/2.Ani	ri Cno	o No Cm	de, Size, No	- 1				-
B. MAWP				si at max	temn	2022			-t			n metal ten			°F at	_	
(11	ternal	(ex	dernal)		****	(internal)	- (extern	al)								
9. Impact test						NC	,						at tes	t temper	ature of		-
_				(indicat	e yes or no	and the co	mponen	nt(s) im	pact teste	ed)							
10. Hydro., pnew,	GUERR	nt test pre	ess.	BY CUS	TOMER	Pr	oof test									-	
11. Nozzles, inspe	ction, a			gs:												,	_
Purpose (Intet, Outlet, Drain, etc.	No.	Diameter or Size	Flange Type	-	Mozzie Mi	aterial	lanan		Nozzle T Nom.	hickn		einforcemer Material	nt H	ow Attac	zhed Flange	(Insp.	
-	-	01 3126	-	 	-		-lange		-	- 0	-	- Avid Cital	- 1304		-	THICK!	-
-	_	-			-				-		-				-		
-	-	-	-				-		-	1	-	-			-	ļ	-
	ــــــــــــــــــــــــــــــــــــــ	<u> </u>			-		-		-	1						1	-
12 Supports, Skirt	-	NO	Lugs			egs	-		Others				Attached			-	_
		Yes or No)		(No	-		(No)				(Descri					and How	
13. Remarks W												OLD FOR			T BEEN		Τ.
DESIGN IS	THE	RESPON	SIBILITY	OF THE	CUSTOME	R. 1	NPS Q	UALI	FIED AS	WE	LDED & V	VITH P.W	.H.T.	J.O. 81	95-01 &	02	
					CERT	TIFICATE	OF S	HOP/	FIELD C	OMP	PLIANCE						
							ili details	s of ma	aterial, cor	nstruc	tion, and we	orkmanship	of this pressu	re vesse	el part con	form	
		de for Pres Authorization	ssure Vessel	s, Section	VIII, Divisio 32,3				Expires				02/27/201	6			
			roteak						Expires			7	111	tin			
Date	6/17/	2013	Name W	GNER I						Sign	led	W	(Representa	UM V			_
						nufacture						$-\upsilon$	(Nepresenta	0461			
		F - 1 - P									ECTION		C		OK		
and employe		holding a v	valid commis	ision issue			ard of Bo	oiler a	nd Pressu	ire Ve	ssel Inspec		State or Prov		***********	LAHON inspecter	-
pressure ves		rt describe	d in this Mar	ufactured	HSB S Data Reno			06/1	7/2013		and		to the best of				
							ASME			VIII. D			is certificate n				, 10
employer ma	kes ar	ny warranty	y, expressed	or implied	, concerning	g the pres	sure ves	sel pa	rt describe	ed in t	his Manufa	cturer's Dat	ta Report. Fur	thermore	e, neither t	he	
inspector nor	his er	mployer sh	all be liable	n any mar	ner or you	persona	injury or	prope	rty damag	e or a	loss of any	kind arisin	g from or con-	nected w	vith this ins	spection	
Date 06	/17/2	013 5	Signed		(U)	NL	CM		Cor	mmiss	sions	NB13413	8A	OK 962			
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