

S.W. 1/4 - Dagle will

TU 4.8863

X 238

PLAINTIFF'S EXHIBIT

SUN-49

Sw A/c Sw
William 883-8723

1.1.1

TDS TS

1/8/69

Jobsite

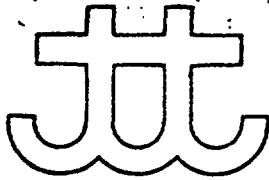
Per Doyle William - Both Retas
are finished & ready for it to
complete

Doyle says they chipped on
one of the panels to get fit
& will need some LHV to patch

Told Ric Brooks would be there
Sat Am.

Advised Brooks 1/8

JP



J T THORPE COMPANY
ENGINEERS-CONSTRUCTORS

P. O. BOX 33399

HOUSTON, TEXAS 77033

INVOICE

INVOICE NUMBER

8-472

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P. O. DRAWER 809
CORPUS CHRISTI, TEXAS 78403

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CUSTOMERS ORDER NUMBER	TERMS	DATE	THORPE JOB NUMBER
58037	NET CASH, 35 DAYS	12-30-1968	2514

TO LABOR, MATERIALS, TOOLS, EQUIPMENT, SCAFFOLDING,
INSURANCE, PAYROLL TAXES, SALES TAXES, TRANSPORTATION,
EXPENSE ITEMS AND SUPERVISION TO INSTALL REFRACTORY
LINING IN TWO PLATFORM HEATERS

AMOUNT OF CONTRACT

\$81,000.00

CONTRACT 100% COMPLETE

\$81,000.00

LESS 90% PREVIOUSLY BILLED

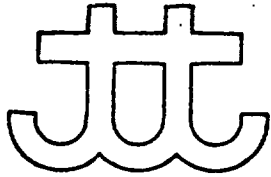
72,900.00

AMOUNT THIS INVOICE

\$8,100.00

THORPE			
DEC 31 1968			
CS		MPP	
TDS		KJ	
TH		FT	
MAS		WE	
JCR		JB	
WNC			
GW		BMT	
WAB		CC	
JP			
ELB			
JOB 2514 GEN			
JOB PURCH			
JOB D & E			
PROSPECT			
GENERAL FILES			

INVOICE
JOB FILE



J T THORPE COMPANY
ENGINEERS-CONSTRUCTORS

P. O. BOX 33399

HOUSTON, TEXAS 77033

INVOICE

INVOICE NUMBER

8-471

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SOUTHWESTERN OIL & REFINING COMPANY
P. O. DRAWER 809
CORPUS CHRISTI, TEXAS 78403

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CUSTOMERS ORDER NUMBER	TERMS	DATE	THORPE JOB NUMBER
58037	NET CASH, 10 DAYS	12-30-1968	2514

TO LABOR, MATERIALS, TOOLS, EQUIPMENT, SCAFFOLDING,
INSURANCE, PAYROLL TAXES, SALES TAXES, TRANSPORTATION,
EXPENSE ITEMS AND SUPERVISION TO INSTALL REFRACTORY
LINING IN TWO PLATFORMER HEATERS

AMOUNT OF CONTRACT	<u>\$81,000.00</u>
CONTRACT 100% COMPLETE	<u>\$81,000.00</u>
LESS 10% WITHHELD	<u>8,100.00</u>
BALANCE NOW DUE	<u>\$72,900.00</u>
LESS PREVIOUS BILLINGS	<u>69,255.00</u>
AMOUNT THIS INVOICE	<u>\$3,645.00</u>

THORPE	
DEC 31 1968	
CS	MPP
TDS	KJ
TH	FT
MAS	WE
OCR	JB
WNC	
CW	BMT
VAB	CC
ELD	
JOB 2514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
CE. GRAL FILES	

INVOICE

JOB FILE

TDS 95

12/24/68

Job 1516 gen

Per Doyle William

Having Problem w/ welds -

No work til After New years probably

He'll call now 12/30 & advise

Called Bricker & told him it'd
probably be week to 10 days @
least.

will plan to get w/ him 1/2 ~ 1/3
to visit D. Pan + & look over that
job.

Jp

12/19/68

Job 7514 gen

per call from Doyle William -

They've got welding complete on one
Heater but no X-Ray or stress
Relief. He'll call 12/23 or 24
to advise further, but there won't
be anything going on til after
Xmas.

12/11/68

Job vs. 14 gen

Brooks Needs Truck 12/13 - Ready to move out

Does Push @ End wall. Came all the way up to top of Door.

After looking @ Drags told Brooks I figured just 2 ccs Push.

Brooks will only load Paddy and tubes & backing doors after fix.

TDS TS

12/1/68

662514 gm

per Brooks

X J To pack get

F.B. Between Bonner Tib in 3/4 of another
move-out + cleanup

About 1 week work for small crew

Tentatively plan to go down
& finish up the week 12/16

Advised Brooks to move Equip out of
Floor - Arrow to Humble - Baytown
& we'd stay base on sched for
12/16. maybe we can get work
base that week.

TDS 13

12/4/68

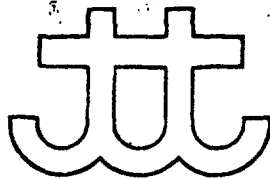
Job 7514 gen

Per Brooks - Will be finished w/ G-site
tomorrow.

Will finish this week, except for
packing around tubes. Pipe fitter
Strike ended & fitter back today.
However, it'll be several weeks
before the item is ready to complete.
Will take fitter that long.

Will send one truck down for @ 2pm
to move out G-site equip for Texas
City. Then when Brooks goes back
we can catch the balance.

JP



J T THORPE COMPANY
ENGINEERS-CONSTRUCTORS

P. O. BOX 33399

HOUSTON, TEXAS 77033

INVOICE

INVOICE NUMBER

8-429

SOLD TO

SOUTHWESTERN OIL & REFINING COMPANY
P. O. DRAWER 809
CORPUS CHRISTI, TEXAS 78403

SHIPPED TO

CUSTOMERS ORDER NUMBER	TERMS	DATE	THORPE JOB NUMBER
58037	NET CASH, 10 DAYS	11-27-1968	2514

**TO LABOR, MATERIALS, TOOLS, EQUIPMENT, SCAFFOLDING,
INSURANCE, PAYROLL TAXES, SALES TAXES, TRANSPORTATION,
EXPENSE ITEMS AND SUPERVISION TO INSTALL REFRACTORY
LINING IN TWO PLATFORMER HEATERS**

AMOUNT OF CONTRACT	<u>\$81,000.00</u>
CONTRACT 95% COMPLETE	<u>\$76,950.00</u>
LESS 10% WITHHELD	<u>7,695.00</u>
BALANCE NOW DUE	<u>\$69,255.00</u>
LESS PREVIOUS BILLINGS	<u>57,240.00</u>
AMOUNT THIS INVOICE	<u>\$12,015.00</u>

THORPE	
NOV 27 1968	
IDS	MPP
TH	KJ
MAS	FT
JCR	WE
WNC	JB
GW	BMT
WAB	CC
JP	
ELB	
JOB 2514 GEN	
JOB PURCH	
JOB D & E	
PROSPECT	
GENERAL FILES	

INVOICE
JOB FILE

SPEED LETTER.

TO MR E.L. Brooks

FROM

J. THORPE COMPANY405 BLUE BIRCH

P. O. BOX 33399

Orange, Texas 77630

HOUSTON, TEXAS 77033

SUBJECT

Hauling of Surplus Brick - Job 2514

-FOLD

MESSAGE

DATE 11/27 1961

Ed - WE have made arrangements
w/ Berry Contracting to haul the bulk of
Surplus Brick on Job. Please stay in
touch w/ Wes Plummer @ Berry for
scheduling this.

-FOLD

SIGNED

REPLY

DATE

19

-FOLD

SIGNED

125 TB

11/18/68

Job vs. 1968

per 1968

Needs Saw 13/10/68

1968 put on TRP. 1/2 way

Has about $\frac{1}{3}$ of Birds laid

Should finish 1st wk of Dec.

Y not for Thanksgiving Holiday,
Could possibly finish next week.

Has 2 local sp. - No pms.
(C.S.)

Job 25148

11/8/68

Doyle Williams - Southwestern

Summit will start Mon, I told him.
Told him we'd make arr. on the pickup.

JP^{le} ~~not~~ OS.

Job 2514 Ben.

11-7-68

1:10 P.M.

Mr. Doyle Williams 512 + T44 - 8863 X 236
Southwestern Oil
Corpus Christi

2- Heaters for UOP.

Ready to go Monday if it can be
arranged with Brooks. He wants
usual thing - late start - whirlwind finish.

He will call you back this afternoon
around 3:30, to see what you have
found out.

Shike over? No, but want to go on anyway.
All of roof gunit, in fact everything is ready to go.
Could go with both gunit and shike at same time.
Check to see if we can work w/o getting a pickup.
Call Doyle and let him know what we'll do.

TDS 95

11/7/68

Job vs 14 gm

Talked to Breko - He's lined up
to go back to CC & start work
Mon Am. Will order Daydt

Fri & Ship Balance of Kooval etc
via mtn. Frt.

(Returned his call)
Talked to M. Perry - They're anxious
for us to go back to work so they
can finish up. Told m. we'd be
back to work Mon. Am.

Williams Never did call back &
I couldn't reach him.

MOS

8/27/68

Lab 514

Progress ch.

MOS %	Del'd to Lab	Im 500	
		XP metal	495
		5/13 sand	744
		"V" sand	260
		5m bath	955
		Lumite	875
		Hong dte	6624
		Ven dte	2000
		Fire clay	1898
		Soplastic	290
			66

14,207 = 56%

<u>Lab 514</u>	5/13	50%	635
	"V" sand	100%	3280
LH	gunk	50%	2744
LH	FIP	100%	1260
	Reef steel	100%	287
	Lock Jcs	100%	1179
	Pers iron	100%	707
	Scaffolding	10%	1786
	Tub supports		
	Pa. steel	100%	350
	1/2" & 100 dte		688
	Cleaning	40%	527
	Made in		150
	T.T.		123

Abt 50-50
56 + 485 = 52%
Y

Say 55%
@ end of month

\$13,714 / 28,221 = 48.5%

B. 11 55% x 81,000 = 44,550

8/25/68

Job #514

AP-HV - - - - - back 1' of Collected
Flue & Top of Flue
plus stack.

AP-HV 1 End complete

✓ sides - $\frac{2}{3}$ of length 5' High
18' , , 10' ✓

9' , , side + Hip

Note in Collected Flue & Stack

Had 660 sq when started on AP-HV

Use! Approx 66 sq on AP-HV

Aug 1 855x Lignite / day (10 Days)

incl. S/B Abt 1 hr per day

Lignite cost 8/49

655x @ mine
450 @ firing

8/29/68

Job 2514 gm

- ✓ Please Break for Del during wk of 9/9
- ✓ Release Burner T.6 & All other men
- ✓ Send INV on Re-entr Hds to Kemp

Verbal per D. W. H. & Handle on
E. 100 to orig P.D.

Get Dinner on 2 vessels to F.P. from
Brooke & give Kemp call re. Handling
of Work.

Figure 2 - 5' x 9' Ponds Replaced complete
on H.P.

8/19/68

Job vs. inch

AP-H1 Remaining to be done:

Collector Fine

2 side wall Areas $1'-0" \times 67'-10" = 134.6$
 1 Roof $\underline{254}$
 390.6

$$390.6 \times 3/4 = 98.0 \text{ CF}$$

Total	LHV	- HTR	- walls & Arch	1520
			Cond. walls	584
			Outlet flue	192
			<u>2307</u>	
			98	
			<u>2104</u>	
			in place	2104

AP-HV

Completed 1 End 2750
 2 side areas $5'-0" \times 46' = 230$
 $\checkmark$ $5'-0" \times 18' = 180$
 $\checkmark$ $6'-0" \times 9' = 108$
 $\checkmark$ High $7'-0" \times 9' = 134$
 $11550 \times 5/11 = 441 \text{ CF}$

Total in place

- B. & H. Total = 2646 CF

John 5/14

@ Beginning of Day 8/19 Had 515 sv
Lum. Nits left

Shipped 1460

Bal 515
945 sv used

22 sv used Job 7603
943 used This Job

943 Batches 1:2:4 LHV used

$4.5 \times 943 = 4160$ cc gross / $4646 = 158$ LHV factor

ck

$4646 / 4387 = 60\%$ $945 / .6 = 1570$ sv Reg'd

fine shot portion of APH1 & APH2

Est Q'm for Stacks

should be OK = 63 sv

Hdr Boxes

14
1647

B/m

1460

187 sv

→ Say you sv Reg'd

9/26/68

Job 2514 gen

Sept Billing

All mat'l @ Lab except Brane #6

Loan to complete	Gravite	- 500
	Bennett	93.5
	Joints	31.0
	Flange pads	96.0
	F.B.	6175
		<u>8830</u>

mat'l's	25,000	x 12 =	30,000
Loan etc	70% x 48,000	=	<u>33,600</u>
			63,600

48
70
3360

TDS

J.P. JP

JOB 2514 GEN

10-17-68

Per Doyle Williams —

He has the ^(SOUTH END) back end out of the heaters —

Wants to know how much advantage this would
be to Brooks —

If they close up the heaters, Brooks would have
use two ports in the roof and regular access to

Please advise one way or the other?

10/17

per call to Doyle Williams w/ Swain

They'll leave Heater ends out for us

will be quite a bit of Patchwork to

do where they tore it up w/ Piber

will be an extra

looks like B/C gets a strike tank

Other than that, B.H. Heaters are ready
for us to complete.

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

THORPE	
OCT 16 1968	
PCS	MPP
TOS	KJ
TH	FT
MAS	WE
JCR	JB
WNC	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB 7514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

Date October 16, 1968

Name of Job HEATER LININGS

Contract with Southwestern Oil & Refining Company

Location of Job Southwestern Refinery

Corpus Christi Plant

Kind of Work Unloading of Rail Car

Customer's Order No. Contract Person in Charge JACK PEIFFER

Date When Job must be Started 10-17-68 and Completed SAME DAY

GENERAL INSTRUCTIONS:

Plans Attached NO

MR. CECIL SHAW:

Specifications Attached NO

We are lining two heaters for Southwestern in Corpus Christi for which we are furnishing all materials.

Due to problems with the job our work was interrupted and we presently have no one working at the jobsite. During our absence a rail car containing the burner tile arrived and we need to get them unloaded and release the car. We would like for you to handle this work for us.

We have a large forklift and pallet jack at the jobsite, and you will not need any equipment from the Houston warehouse. The team track where our material comes in is located about 2 blocks down the street from the main refinery gate. We did have some brick stockpiled at the siding, and they are probably still there. Brooks has been unloading his cars at the siding and stockpiling the material covering it with tarps, and when he needed material, just going down with the forklift and hauling it back to the jobsite inside the refinery. We would like for you to unload the car first of all, and if Brooks has any material still stockpiled there, merely stack the burner tile and cover it securely with tarps. If Brooks has moved all of his material to the heater site, we would like for you to do the same.

Upon arriving in Corpus Christi at the refinery, have the guard at the main gate contact Mr. Doyle Williams to pass you through the gate in order that you might pick-up the forklift and pallet jack. Mr. Williams can direct you to the rail siding.

Continued.....

Signed _____

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

Date _____

Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

PAGE - 2 -

Specifications Attached _____

All work is to be done on a straight time basis with scales as follows:

 Yourself \$4.85/hr. plus \$10/day

In addition to the above, we will pay you 4 hours travel time each way to and from the jobsite, plus roundtrip air fare of \$31.50. Ed Brown mentioned that you would probably need someone to help you with the pallet jack and you can either hire a laborer locally in Corpus Christi or if you prefer, take someone with you to assist. In the event you take someone from Houston, we will pay them ~~local~~ scale or if you hire a laborer in Corpus Christi, we will pay them the local scale which is \$2.60 per hour. In the event you hire a Corpus Christi laborer, please call Mary to compute the net wages for you and the deductions and you can fill out a cash pay off slip, copies of which are attached, and give the man cash. Be sure to make a copy for the man and for the office. Ed said you would not need any cash and we will reimburse you for this upon your return.

I have placed a call for Ed Brooks and will write you a note supplementing this work order to advise you of the whereabouts of the key for the forklift or any change from the above. The car number is B&O 46457. We also attach to this work order a copy of the shipping ticket so you can check the car contents for the proper quantity and make note of any breakage.

If you have any questions or run into any problems, please give me a call at the office.

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file-JP

ALL BLUE PRINTS AND SPECIFICATIONS TO BE RETURNED
TO OFFICE UPON COMPLETION OF JOB.

Signed _____

10/14/68

Job 2514 gm

per Kemp w/ SW Oil

B4 D-468457 @ Job

T.D.S. TS

10/10/68

Job 2514 gm

per Doyle Wilson

W. 11 Floor Tubes in Both Heaters by

Wed 10/16

W. 11 LV. Top open

4. End out

F. HERS f B/L out

How long to complete ?

2-3 wks

Doyle will get in touch w/ us

When LOR is settled

J.P.

Job 751K gm

Per Doyle Williams

B/c Contract Expires 10/18

No point in starting back to work

B/c Planned to be going on strike.

He'll Advise As Developments occur.

Sp

9/16/68

TDS B

Job Vixen

Told Brooks It didn't look like
we were going to shake the
Floor Job loose this week

Plan to stay there, start
cutting back & we'd start hauling
Floor Slabs.

1st load there Wed. 9/18.

TOS TS

CJ

9/14/68

Job 2514 gm

Pat Brooks

How chg Repairing Ling in Pads? 2514P

Brooks thinks he'll get caught up next week
J.W. Still hasn't got attorney in for
1st Hrr.

Told Ed we were trying to get small job from
Flores & could be shut down long enough to
handle? Thinks he can Has 3 cases in
Now 2 more on way Would need to
hold up on slabs

Will Advise in Am

We ordered 20.5% of units after to finish & Brooks
says he doesn't know what happened, but looks like
lot of it will be left over JP

J.P.J.P

Heater
Universal Oil Products Company

Southwestern Oil & Refining Co.
Corpus Christi, Texas

JOB 2514

TASK LIST

THRU 9-

		<u>Unit</u>	<u>Unit Cost</u>	<u>estimate</u>	<u>actual</u>
A.	SAND BLASTING	12,699 lb	\$.10/lb	\$1,270-	206-
B.	INSTALL "V" ANCHORS	25,232 ea	\$.13/ea	\$3,280-	2,237-
C.	FIRE BRICK	499 M	\$.125/M	\$6,125-	
D.	<u>L.H.V. GUNNED</u>	4,587 CF	\$.125/CF	5,484-	2,391-
E.	<u>H.H. GUNNED</u>	168 CF	\$.300/CF	504-	66-
F.	<u>L. H. POURED</u>	50 CF	\$.200/CF	100-	
G.	<u>L. H. FORMED AND POURED</u>	504 CF	\$.250/CF	1,260-	1,146-
H.	<u>BURNER TILE</u>	110 sq ft	\$.850/sq ft	935-	
X.	REINF. STEEL SET	2,866 #	\$.10/#	287-	287-
J.	LATH JOINT FAB. AND INSTALLING	4,716 LF	\$.25/LF	1,179-	1,108-
K.	PLASTIC INSULATION LATH JOINTS	4,716 lb	\$.15/lb	707-	651-
L.	SCAFFOLD	11,158 lb	\$.20/lb	2,232-	690-
M.	TUBE SUPPORT CASTINGS PAINTED	700 ea	\$.50/ea	350-	91-
N.	FLOOR PANELS ERECTED	50 ea	\$.12/ea	960-	
O.	MATERIAL HANDLING	11 cars	\$.125/car	1375-	715-
P.	CLEAN UP		5%	1318-	551-
Q.	MOVE IN - OUT			300-	82-
R.	TRAVEL			245-	58-
S.	UNALLOCATED SUPERVISION			310-	238-
T.	EXP JOINTS. PLYWOOD			26,221	334
					10,851-

38% OF ESTIMATE
THRU 9-4-68

PER J.P. JOB ACTUALLY 55% COMPLETE 8-31-68

TDS DB

9/9/68

Job vs. gun

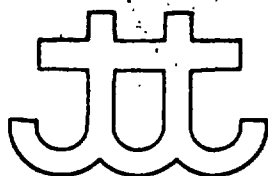
Per Brooks

Will Finish shooting 2nd Hrs Today

START START Stacho Tamm

Do 2 skint. Sun + the web

SEND SLOOS DOWN NEXT WEEK



J T THORPE COMPANY ENGINEERS-CONSTRUCTORS

P. O. BOX 33399 HOUSTON, TEXAS 77033

INVOICE

INVOICE NUMBER

8-306

SOLD TO

SOUTHWESTERN OIL & REFINING COMPANY
P. O. DRAWER 809
CORPUS CHRISTI, TEXAS 78403

SHIPPED TO

CUSTOMERS ORDER NUMBER	TERMS	DATE	THORPE JOB NUMBER
58037	NET CASH, 10 DAYS	8-30-1968	7514

TO LABOR, MATERIALS, TOOLS, EQUIPMENT, SCAFFOLDING,
INSURANCE, PAYROLL TAXES, SALES TAXES, TRANSPORTATION,
EXPENSE ITEMS AND SUPERVISION TO INSTALL REFRACTORY
LINING IN TWO PLATFORM HEATERS

AMOUNT OF CONTRACT

\$81,000.00

MATERIALS DELIVERED TO THE JOBSITE AND
LABOR PERFORMED TO DATE

\$44,530.00

LESS 10% WITHHELD

4,455.00

AMOUNT THIS INVOICE

\$40,095.00

THORPE			
MID 221068			
IDS	KJ		
TH	FT		
MAS	WE		
JCR	JB		
WNC			
GW	BMT		
WAB	CC		
JP			
ELB			
JOB	2514	GEN	
JOB		PURCH	
JOB		D & E	
PROSPECT			
GENERAL FILES			

INVOICE

JOB FILE

8/23/68

Job # 514 gm

per Brooke - will finish 1st Rept

Monday -

Prod 870 SK Lignite left 8/23

Look like mat'l will be short right

~~the~~

TDS 93

8/19/68

Job visit

Per Brook - Abt $1/2$ than w/ 1st
Heater.

Brook says least amt of rebound
he's ever had - use of fine clay
balling water. Just started today on
2nd load of Haydite. 4 or 5 wheelbarrows
of rebound per day. Started last tier

Will finish 8/20 w/ Anchors in 2nd heater.

Send blasting each day

No operator used yet

Gravite Crew 2 on
5 hr

TDS TS

8/12

Job visit

Brooks Load Thru 8/7 4462
+ 2 days @ 300 600
5500

Approx Est Load Capable: 1/2 Anchor 1640

1/2 Washers 590

1/2 Plates 354

(all scaffolding)

75% Scaffold 1674

3 cans & loaded 375

Made in 150

Travel 122

Est Load \$4905

Approx Act Load \$5062

3.06610
3.06610

8/17 1394

SPEED LETTER.

TO MR. E. L. BROOKS

FROM

J. J. THORPE COMPANYLAGUEWEST APTS #101

P. O. BOX 33399

3002 ANTELOPE

HOUSTON, TEXAS 77033

SUBJECT Corpus Christi, TexasSummary Sheet - Job #516

-FOLD

MESSAGE

DATE 8/13 1968

Ed - Attached is Summary Sheet
Showing how various items of
Job were figured to be installed.
I trust this will be helpful.

-FOLD

SIGNED

J. J. Thorpe

REPLY

DATE _____ 19____

-FOLD

SIGNED

7/18/68

Job 514 g

✓ Order Lumber on pallets -

✓ Will need Champ Fork Lift

✓ Send Ed Summary List of How
Various Items of Casable are installed

✓ Make App w/ Berry to rent w/m

✓ Ck w/ Marshall on A/c & make
App for that

✓ Send Ed List of Doctors for Lib. use

8/7/68

Per Broker

Job visit

Receiving MAT

1 wk for 2 men to install XJ

How can - All Fire Clays

All Arise

Good F.B.

Can of Lignite in Tank today

Where is Vermiculite?

Has scaffold in 2nd floor

& making for anchors

John. Haden @ Job Now.

Laid off 2 welders only has 2 now.

May start S/B/GUNNING Monday

Already has one load of Haydite

@ Job -

Ck w/ Barry on R/C

7/29/68

Job 2514

Per "notes"

How is expected work going?

Told Ed to check back the plan
& we'd advise

Has 4 welders & will start about
Pm anchors completed - 1st
Rebar Tues Pm

Brown plans to grade "V" is w/
Jim 500 before welding to wall.

SPEED LETTER.

TO

MR. E.L. Brown
SAGEWIND APTS. #101
3002 ANTelope

FROM

J. D. THORPE COMPANY

P. O. BOX 33399

HOUSTON, TEXAS 77033

SUBJECT

Corpus Christi, Texas

Acc. den. - L. 67574 Jc

-FOLD

MESSAGE

DATE

1/29

1962

Ed - In the event of a
lab.ite injury, please utilize one
of doctors on attached list if
possible.

-FOLD

SIGNED

J. W. Deffe

REPLY

DATE

19

-FOLD

SIGNED

7/24/68

Job 25145

4153-2514 Berry P.O. for W/m

Where is FK Lift & pallet jack
(W/ next Truck)

OK Specs on x.p. metal & see how
Attached. Brooks thinks they clip on.
Get x.p. metal "V.I." on down &

Will give Brooks something to do.

7/22/68

Job 25.4 Gen

per Buck -

Need 20 - 3' scaffolding

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

THORPE	
JUL 17 1968	
Job No. 2514	
ELB	DJP
JOB	GEN
JOB	D & E
PROSPECT	
GENERAL FILES	

Date July 16, 1968
Name of Job Refractory lining of Two Platforming Heaters
Contract with Southwestern Oil & Refining Company
Location of Job Southwestern Refinery
Corpus Christi, Texas
Kind of Work Firebrick and Castable
Customer's Order No. 58037 Person in Charge Mr. Doyle Williams-Southwestern Oil
Date When Job must be Started July 22, 1968 and Completed Within Approximately 10 Weeks

GENERAL INSTRUCTIONS:

Plans Attached YES

Mr. E. L. Brooks:

Specifications Attached YES

We have a lump-sum contract with Southwestern Oil & Refining Company to install the refractory lining in two platforming heaters at their Corpus Christi Refinery and would like for you to handle this work for us.

We will verbally review pertinent points of the scope of work covered by our contract with Southwestern, but to facilitate your understanding of the job, we attach several sheets reproduced from our original proposal, a copy of a letter from Universal Oil Products requesting clarification of certain points, and finally, our letter to them in reply to their questions. In addition, we attach a complete set of the drawings and specifications for the work.

All materials for the job are furnished by Thorpe in accordance with the attached bill of materials. You will notice that our quantities differ, generally on the lesser side, from quantities shown on the UOP requisition sheets. These differences result largely from our estimate based on past experience and reflect the fact that this job was very tightly estimated. As the work progresses, we will need to make a detailed periodic review of materials consumed at a given date, and maintain a close running analysis of the job from both a material and labor standpoint. You will note the heaters contain precast floor panels for their floor. We have previously cast these slabs at our Houston warehouse and they are current stock-piled there waiting shipment. These slabs were made with no spares, but in the event one or more should become cracked or damaged in transit or at the jobsite, please notify us as soon as possible in order that the spare might be fabricated.

We have estimated the schedule for the work to require approximately 10 weeks. In our conversations with the customer, we further estimate that there will be an approximate 2 week time lag on progress between the two heaters. This should work nicely to our advantage in completing one phase of the work on a given heater before commencing the same undertaking on the second heater.

ALL BLUE PRINTS AND SPECIFICATIONS TO BE RETURNED
TO OFFICE UPON COMPLETION OF JOB.

Signed _____

WORK ORDER

Date _____ Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

Page 2

Specifications Attached _____

Erection of the heaters is being performed by Berry Contracting, Inc. for Southwestern. While we have no direct contractual relationship with Berry on this project, our past working relationship with them should accrue to our benefit on this job. In addition, we are also afforded the opportunity to continue the favorable impression Berry has of Thorpe with a good performance on this job. Needless to say, we feel quite certain our job relations with Berry will be excellent.

You will notice that our proposal was originally made to UOP. Southwestern has retained UOP has their engineer on this project and we will no doubt have a UOP inspector at the jobsite. UOP will insist on strict adherence to the specifications as you will no doubt infer from reading Mr. Shaw's letter requesting clarification of our proposal. Construction methods will, of course, be our decision to make, however, UOP has made it quite clear that they intend for the heater settings to be constructed in accordance with their drawings and specifications. To further acquaint you with their attitudes in this respect, we attach copies of correspondence regarding the castable anchors for the job. You will appreciate the position that UOP is in as the customer's engineer, in that their design once finalized, is held forth to be the latest and best way to perform the work. Accordingly, any suggestions you might have for change should be first discussed with us in the Houston office, and any proposals resulting therefrom will be made by us in writing to UOP. Along this line, you will need to thoroughly study the construction sequence outlined on the drawings and become thoroughly familiar with the letter of the UOP specifications and drawings for the work.

When you have completed your study of the drawings and specifications, you should then thoroughly plan your construction operations and sequence. You will note that certain items such as the stack linings can be performed on the ground concurrent with other work. On items of work such as installation of the floor slabs, we would appreciate your ingenuity in erecting these slabs in the cheapest most efficient manner possible. It may be that it will be to our advantage to rent a cherry-picker or small crane from Berry to drop these in from the top of the heater and locate them in place, or, the most economical method may be to slip them under the heater shell and by use of a small specially designed dolly hoist them into place from below. Please study the slab support steel carefully in order that we might request certain items of structural steel to be

ALL BLUE PRINTS AND SPECIFICATIONS TO BE RETURNED
TO OFFICE UPON COMPLETION OF JOB.

Signed _____

WORK ORDER

Date _____

Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

Page 3

Specifications Attached _____

left out if it will be to our advantage.

Regarding the floor slabs, we would like to offer the following suggestions for your consideration. The drawings show a certain space allocated for installation of these slabs along with a suggested clearance between the slabs. We would suggest that you measure the actual distance available in the heaters and subtract the combined width of the specific slabs to go in that location. The difference divided among the spaces should provide the exact spacing you will need to install. This may or may not be that shown on the drawings. To obtain the length or combined dimension of the floor slabs we would suggest that you actually lay the slabs out adjacent to the heater on the side in which they will be installed. While not shown on the drawings, we have provided 2 stainless lifting eyes in the top surface of each slab. This is one item which we did not check with UOP on, thinking it essential to have, and not wishing to risk the possibility that they would turn down our request. If requested, we may have to cut off these eyes or even chip the castable down to the reinforcing steel, and patch the areas. If so, we feel the cost of doing this will be more than offset by the ease of handling which will be provided by the lifting eyes. Please carefully consider the sequence of construction of the bridgewalls. If requested by us, the erector will leave out end panels for access as necessary. On the large ultraformer heater at Suntide last year, Butch McCleskey constructed a ramp and moved brick for the bridgewall into the heater from both ends on pallets with pallet jacks. This method could be used to advantage and we offer it for your consideration. If you elect to use this method, consider also whether the walls should be constructed before or after the slabs are installed. If after, we should use heavy planking to spread the load and eliminate possibility of damage to the slabs.

When you have had time to determine your needs for tools and equipment, please furnish Ed Brown with a list of your needs and we will have the tools and equipment shipped to the job by a Company truck. The type of scaffolding to be used will be determined by whether or not the convection tube bundle currently rests on the bridgewall foundations. If Southwestern will need to install the convection bundles from above, and if the bundles are not in our way during construction, we should be able to use frame-type scaffold to good advantage. If the bundles are indeed setting on the foundation, we will most likely need to use tubular scaffold.

ALL BLUE PRINTS AND SPECIFICATIONS TO BE RETURNED
TO OFFICE UPON COMPLETION OF JOB.

Signed _____

WORK ORDER

Date _____ Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

Page 4

Specifications Attached _____

Yield Our warehouse stock of tubular scaffold is practically nil at this time, and whichever ~~time~~ scaffold you elect to use will probably need to be rented. Frame-type scaffold can readily be obtained in Corpus Christi, however, tubular scaffold may not be available and may necessarily be brought from Houston.

The first items of work, will of course, be sandblasting of the steel surfaces, and installation of the refractory anchors. You will note the large quantity of refractory anchors will necessitate a considerable effort to get completed without undue delay. In addition, you will note that expanded metal strips are to be welded over all panel joints, and filled in with plastic insulation. This plastic insulation is JM-500 which is a very special item, and after completing a portion of this work on the first heater we will need to know immediately whether or not we appear to have ample supply. If not, we will need to order more at the earliest possible moment.

All work on the job will be performed on a straight-time basis with scales as follows:

Yourself	\$5.625/hr. Plus \$10/day Plus Motel
Bricklayers	\$5.00/hr Plus \$10/day (Assuming Houston based men)
Other crafts	Local Scale

In addition to the above, you may find it necessary to bring a labor foreman or some other craft from Houston in order to secure competent workmen. If this is the case, we will pay these men the Houston scale. Bricklayers brought from Houston will be paid 4 hours travel time each way to and from the jobsite plus roundtrip bus fare to Corpus Christi. Since you are already on the site in Corpus Christi, you have previously been paid travel time. However upon completion of the job, we will pay you 4 hours travel time for return to Houston, plus .08¢ per mile for your car.

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

Date _____

Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

Page 5

Specifications Attached _____

We hope the foregoing, while lengthy, will provide you with a thorough understanding of this sizable job. We are certain you will appreciate the fact that this is a somewhat unusual heater job in that we are furnishing both labor and materials, contrary to the usual practice of these being labor only. Accordingly, we will be more than casually interested in your progress regarding material consumption. Please keep in close contact with us on this item.

We look upon this excellent contract with Southwestern as a good opportunity to ^{Cement}submit a significant relationship with this customer, and trust you will perform your usual good job for them. Please let us know how we can help you in any manner to make this job more profitable for Thorpe.

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file-JP

- P. S. Please keep your time breakdown in accordance with the attached Task List. After we have had a chance to review the job with Southwestern on Thursday July 18, we will then prepare a schedule for release of the materials. Please Advise if you think it would be advantageous to have the Lumnite cement palletize

Signed _____

2 Platforming Heaters

Southwestern Oil & Refining Co.
Corpus Christi, Texas

JOB NO. 2514

BILL OF MATERIALS

<u>QUANTITY</u>	<u>ITEM</u>
3300 Lbs. (66 sacks)	<u>JM-500 Plastic Insulation</u>
600 Lbs.	B & W Bulk Kaowool
4960 Sq.Ft.	1/2" x 3.4#/sy Expanded Metal
260 Sacks	Sandblast Sand
4150	1/2" UOP V-Anchors
22,400	2" UOP V-Anchors
49.1 M	Firebrick 9" Straights
500	Firebrick 9" Soaps
1460 sacks	Lumnite Cement
124 Cubic Yds.	Bulk Haydite
1375 Sacks	Vermiculite
124 Sets	Burner tile
9.6 Tons	Air-set Mortar
7.5 Tons	Fireclay
110 Gallons	Eagle Pitcher Stalastic

THORPE	
JUL 17 1968	
FCS	MPP
TDS	KJ
TH	FT
MAS	WE
JCR	JB
WNC	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB	GEN
JOB	PURCH
JOB	D & EI
PROSPECT	
GENERAL FILES	

The 1/2" x 3.4#/sy expanded metal will either be cut and bent in our Houston warehouse and shipped to you next week or we will ship the expanded metal to you and let you fabricate the expanded metal panel joint breaks at Thorpe Insulation's Corpus Christi warehouse. You will note the large quantity of fireclay in the above list. This is for addition to the Lumnite-Haydite-Vermiculite mixes, and should be used in the ratio of 10 lbs. fireclay per sack of Lumnite cement in each batch. This would apply for both the Lumnite-Haydite-Vermiculite mixes and the Lumnite-Haydite mixes, where gunned.

The Eagle Pitcher Stalastic was previously shipped to the jobsite, and is largely for use by the erector in coating the joints between the steel panels during erection. However, there should be approximately 40 gallons of this material left which should be more than ample to paint the tube supports in the area embedded in the refractory lining. The bridgewalls are to be laid in air-setting mortar. We will furnish you with an additional list next week listing the suppliers for the various items, how and when the materials are to be shipped.

Heater
Universal Oil Products Company

Southwestern Oil & Refining Co.
Corpus Christi, Texas

JOB 2514

TASK LIST

- A. SAND BLASTING
- B. INSTALL "V" ANCHORS
- C. FIRE BRICK
- D. L.H.V. GUNNED
- E. L.H. GUNNED
- F. L. H. POURED
- G. L. H. FORMED AND POURED
- B. BURNER TILE
- X. REINFORCING STEEL SET
- J. LATH JOINT FAB. AND INSTALLING
- K. PLASTIC INSULATION LATH JOINTS
- L. SCAFFOLD
- M. TUBE SUPPORT CASTINGS PAINTED
- N. FLOOR PANELS ERECTED
- O. MATERIAL HANDLING
- P. CLEAN UP
- Q. MOVE IN - OUT
- R. TRAVEL
- S. UNALLOCATED SUPERVISION

TDS 75

7/15/68

Job 7514 ge

P/c to Doyle Williams —

Just About Have All panels
on 1st Reoster up. Doyle th'ns
we can START Scaffold & welding
Anchors Next Monday.

Unless Rain Again delays them,
will plan to meet w/ him @
Jobsite Thursday 7/18 (& Howard Brooks
there Also) to review Job.

(Looks now like we can leave Butch
@ Reynolds - Gregory). JP

SPEED LETTER

TO MR E.L. Brubaker
SAGE WEST Apartments #101
3002 ANTELOPE

FROM J I THORPE COMPANY

P. O. BOX 33399

HOUSTON, TEXAS 77033

SUBJECT Corpus Christi, Texas HEATERS - SOUTHWESTERN OIL

-FOLD

MESSAGE TJ-625HDATE 7/15 1964

Ed - I talked to Doyle Williams this Am
 & it looks like the 1st Heater may be
 ready to start 7/24. I plan to come down
 for a jobsite meeting w/ Doyle Thurs 7/18.

Will come by Coastal & pick you up.

-FOLD If this changes, I'll let you know. Will have
 work order & drawings for you then. DATE 7/15 Ed Rafferty

SIGNED

Area Code 713 MI 4-1267

J T Thorpe Company
P. O. Box 33399
HOUSTON, TEXAS 77033

LETTER OF TRANSMITTAL

DATE	7/9/68	JOB NO.	# 2514
ATTENTION	Mr. E. E. Kemp		
RE:	SW Oil Ref Job 8664		
	P.O. # 58037		

TO

SOUTHWESTERN OIL REF CO.
DRAKE 809
Corpus Christi, Texas

GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☒ P.O. Copy

COPIES	DATE	NO.	DESCRIPTION

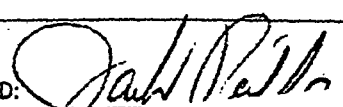
THESE ARE TRANSMITTED as checked below:

- | | | |
|--|---|---|
| ☐ For approval | ☐ Approved as submitted | ☐ Resubmit _____ copies for approval |
| ☐ For your use | ☐ Approved as noted | ☐ Submit _____ copies for distribution |
| ☐ As requested | ☐ Returned for corrections | ☐ Return _____ corrected prints |
| ☐ For review and comment | ☐ _____ | |
| ☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US | | |

REMARKS

For your information in Handling
Tadpole Parking

PY TO

SIGNED: 

6/28/68

TDS

Job 2514 gm

Called Foster Kemp w/ SW
And Advised that we were
Shipping 2 drums of Sodasol
Via Brown Express /

Use STD. Grade 1st. of

UOP Insp. Don't ok use of High Temp.

We'll order 20 gal. Add'l STD grade

Joe

Clare Ram UN 9-4881

western union

WESTERN UNION TELETYPE SERVICE

TOP ESP

TOP DES PLANCHER JUL 2 1968

U. T. THORPE COMPANY

HOUSTON, TEXAS

FOR JACK PEPPER

REUR TELX ASK FOR FURNISH ASBESTOS SAMPLE PACKING FOR TON DEBERT

IN PURE AND SIZE AS SHOWN ON A

END

TH 4

1 1968

FUB

Frank Tray still can't identify what they want, what style is req'd? This stuff is not in local stock, approx 3 wk del.

Per Mon 2nd/J-m
order style 156-370

THORPE
JUL '2 1968

FCS	TS	MPB
TH	TS	KJ
MAS		FT
JCR		WE
WNCI		JB
JP	JP	GW
LAK		W/3
MW		
ELB		
JOB 2374	GEN	
JOB	PURCH	
JOB	D & E	
PROSPECT		
GENERAL FILES		

6/28/68

Job 2514 gen

Rev Show w/ VOP

VOP 8664 - R. 15

EP STALASTIC

VOP 8664 - R. 29 & R. 35

ASB TAD pole

putting up panels on 1st Heater Now

884- 8863 X 238

X 211 FOSTER Lamp.

WESTERN UNION

SENDING BLANK

CALL LETTERS	NI	CHARGE TO	PD	HOUSTON, TEXAS	6-28-68
UNIVERSAL OIL PRODUCTS COMPANY MR. W. B. SHAW 30 ALGONQUIN ROAD DES PLAINES, ILLINOIS RE S.W. OIL & REFINING PD 58037, JOB 8664, YOUR REQ. R-21 & R-35. PLEASE ADVISE STYLE J-M ASBESTOS TADPOLE PACKING REQUIRED. STALASTIC SHIPPED FROM THORPE HOUSTON WHSE. TODAY. PEIFFER - J. T. THORPE COMPANY					

Send the above message, subject to the terms on back hereof, which are hereby agreed to

PLEASE TYPE OR WRITE PLAINLY WITHIN BORDER—DO NOT FOLD

1269—(R 4-55)

THORPE	
JUN 28 1968	
FCS	MPP
JDS	KJ
TH	FT
MAS	WE
JCR	JB
WNC	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB 2574	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	



DRAWING NUMBER

NO. 8664-239

SHEET NO. 1

TOTAL SHEETS

W. O. NO.

DATE DEC 1 '57

APPROVED

MATERIAL INCLUDES-

HEADER COMPARTMENT DOOR TAPOLE FOR
PLATFORMING INTERMEDIATE HEATER AP-H2.

BY ACCEPTING THIS ORDER THE SELLER AGREES TO INDEMNIFY AND HOLD HARMLESS THE PURCHASER AND/OR ITS LICENSEES FROM ANY LOSS, DAMAGE OR INJURY ARISING OUT OF A CLAIM OR SUIT FOR ALLEGED INFRINGEMENT OF PATENTS, RELATING TO THE PROPERTY DESCRIBED HEREIN, AND WILL ASSUME THE DEFENSE OF ANY AND ALL SUCH SUITS AND WILL PAY ALL COSTS AND EXPENSES INCIDENTAL THERETO.

ITEM NO.	QUANTITY	DESCRIPTION OF MATERIAL
1	20	Furnish the following material: Lineal feet 1/2" diameter x 1-1/2" Stem Asbestos Tadpole. SUGGESTED SUPPLIER: Jorns-Manville, Inc. 22 East 40th Street. New York, New York <i>Style</i>

PROCESS DIVISION
30 ALGONQUIN ROAD • DES PLAINES, ILLINOIS 60018
REQUISITION

DRAWING NUMBER

SWEET NO.

TOTAL SHEETS 1

W. O. NO.

DATE 6-11 : 1977

APPROVED

MATERIAL INCLUDES-

HEADER COMPARTMENT DOOR; TADPOLE FOR PLATFORMING CHARGE
HEATER AP-41.

BY ACCEPTING THIS ORDER THE SELLER AGREES TO INDEMNIFY AND HOLD HARMLESS THE PURCHASER AND/OR ITS LICENSEES FROM ANY LOSS, DAMAGE OR INJURY ARISING OUT OF A CLAIM OR SUIT FOR ALLEGED INFRINGEMENT OF PATENTS, RELATING TO THE PROPERTY DESCRIBED HEREIN, AND WILL ASSUME THE DEFENSE OF ANY AND ALL SUCH SUITS AND WILL PAY ALL COSTS AND EXPENSES INCIDENTAL THERETO.

[illegible]

JP-18

Job 2514 Gen

6/19/68

Dayle Williams - SW Oil Corp. Corpus
Talked to Jack about how long to do
job.

Letter of Mar 12, 1968 says 10 wks.

Jack:

Look at job, if both letters ready at
same time, how long to do.

He said, you had talked about shooting
walk with tubes in. I objected to that.

Talking now about dropping conv. net
from top, starting gunite ASAP.

Think they will be ready to start gun
approx Aug 1st or maybe sooner.

Want us to look at schedule and see
how rapidly we could get gunite out of way so then
could be piping. Want to complete job by duck season.
Doyle will call you Mon 6/24. HE DID NOT CALL - EAK HEATER
HOWEVER, THIS INCLUDES FLARE SCARS.

6/10

Job 2514

Rev Vaughan w/ C.C. B/c

B/c 460/HR No F ranges

Exp. ins 9/30/68

TDS 13

6/7/68

Job 4514 gen

per Talk w/ Doyle Williams @

Jobsite - Having problems getting
Castings & Tubes for Heaters.

If they can figure out how to
drop tubes in from top work could
start approx ^{1st} ~~1st~~ August. If not, look
like Sept.

May 20, 1968

Universal Oil Products Company
Process Division
30 Algonquin Road
Des Plaines, Illinois 60016

ATTENTION: Mr. W. B. Shaw, Purchasing Department

SUBJECT: REFRACTORY LINING OF TWO (2) UOP HEATERS - SOUTHWESTERN OIL
& REFINING COMPANY - CORPUS CHRISTI, TEXAS - SOUTHWESTERN
PURCHASE ORDER NO. 58037 JOB 866 FOR - THORPE JOB 2514

This letter will confirm our conversation of May 9, 1968. On that date I noted to you that one of our Engineers had noticed the preparations for casting floor slabs on the above heaters. He questioned whether or not the reinforcing steel should be coated with Bitumastic Type paint to provide for thermal expansion when the heater was placed in operation.

Since this was not spelled out on the drawings either way, we inquired about this item. In accordance with the instructions from your Engineering Department, we are proceeding with the casting of these slabs leaving the reinforcing steel bare (uncoated) when cast into the floor slabs.

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file

In Duplicate

cc: Mr. F. E. Kemp
Southwestern Oil & Refining Company
P. O. Drawer 809
Corpus Christi, Texas 78403

cc: Mr. Doyle Williams, Project Engineer

THORPE	
MAY 20 1968	
TS	1022
IDS-75	
TH	FT
MAS	VE
JCR	JB
WNCI	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB 2514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

TDS
JP JP

5-23-68

JOB 2514 GEN

ANALYSIS: SLABS THRU 5-22-68

40% COMPLETE:

LABOR

BARE: #1,547 X .40 = #618.80

EST

ACT (TO DATE)
#530.45

504 CF X .40 = 201.6 CF

#327/CF

#263/CF

Looks ok when we add freight for
transport to jobsite, should just
get equal estimate

TDS

5/7/02

Lab 2514 gm

Per Bill Shaw w/ Vof —

No coating on Reif Steel for
Floor Flans. Told Shaw, ok.

JP



PROCESS DIVISION
30 ALGONQUIN ROAD • DES PLAINES, ILLINOIS 60016

VIA AIRMAIL
File Ref; 8664

J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. Jack Peiffer

SUBJECT: Southwestern Oil & Refining Co.
Purchase Order No. 58037
Your Job No. 2514

Gentlemen:

Thank you for your letter of April 15 and information on the Nelson refractory anchor.

At one time UOP specified a machine welded anchor which was a split pin similar to a cotter pin. This cotter pin type required a bending operation after welding. This new Nelson anchor eliminates this operation but does not overcome other objections.

Our experience has shown that handling of individual small pieces which tend to become tangled is very time consuming. The time spent by welders in selecting one anchor and one ferrule and placing these parts in the welding gun is considerable. We also found that it was almost impossible to specify the quantity of anchors because a great number of anchors and ferrules were dropped and lost.

Please note that the UOP type anchor is furnished in sections of ten anchors. The welder attaches the first anchor by striking an arc on one side of the wire and then by lifting of the section, this first anchor will separate from the section at the "nick break" as shown in UOP Specification 296. This operation is repeated until all ten of the anchors have been attached. The welder can apply ten anchors quickly and without being required to pick up additional material.

(continued)

TDS 2
Sumner like
copy of this
spec.
Jul. 10 on hand
this spec. on hand?
April 18, 1968

THORPE	
APR 22 1968	
FCS	MPP
TDS	KJ
TH	FT
MAS	WE
WNC	JB
LA	GW
LAK	WAB
MW	
ELB	DJT
JOB 2514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

J. T. Thorpe Company
April 18, 1968
Page 2

We do not wish to discourage you or anyone from offering suggestions and we are aware of the tight construction schedule, however, we know from experience that the present anchor applied in accordance with Specification 296 will provide excellent reinforcing for the insulation and can be attached in less time and probably at lower cost. Please proceed in accordance with Specification 296.

Thank you again for your suggestion and your desire to give Southwestern a good job on schedule.

Very truly yours,

UOP PROCESS DIVISION

W. B. Shaw
W. B. Shaw
Purchasing Department

WBS:lms

cc: Southwestern Oil & Refining Co.
1 - Mr. F. E. Kemp
1 - Mr. Doyle Williams

April 15, 1968

Universal Oil Products Company
30 Algonquin Road
Des Plaines, Illinois 60016

ATTENTION: Mr. W. B. Shaw, Purchasing Department

REFRACTORY LINING OF TWO (2) UOP HEATERS -- SOUTHWESTERN OIL & REFINING
COMPANY - - CORPUS CHRISTI, TEXAS - - SOUTHWESTERN PURCHASE ORDER NO. 58037
THORPE JOB NO. 2514

Refractory anchors for the castable refractory lining of the above heaters are to be as outlined in UOP Specification No. 296, Page 2. The Nelson Stud Welding Division of Gregory Industries, Inc., has only recently developed a very similar refractory anchor which can be machine-applied. We request approval of this Nelson refractory anchor.

While the cost of the Nelson anchor is greater than the one manufactured by Fabricated Steel Products Company, we feel this additional cost can be largely overcome by the labor savings of machine application. The large quantity of anchors required for this job as well as the tight construction schedule, we feel, make it very desirable to speed up the refractory anchor applications as much as possible.

Nelson is just starting production of these anchors, and regular production samples were not available. However, we enclose a hand-made sample, which along with the enclosed drawing will give you the details on this anchor. The anchors for the Southwestern job would, of course, be of the specified size and all anchors would have flux-loaded ends.

Continued.....

THORPE	
APR 15 1968	
PCS	MRP
TDS	KI
TH	FT
MAS	WE
JCR	JB
WNC	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB 2514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

TOS

4/15/68

Lab 2514

Called Doyle Williams w/ S.W.

Re: Approval of Nelson S.W.

Sent letter to Oof w/ copy to
S.W. Reg. Approval.

Heater
Universal Oil Products Company

Southwestern Oil & Refining Co.
Corpus Christi, Texas

JOB 2514

TASK LIST

- A. SAND BLASTING
- B. INSTALL "V" ANCHORS
- C. FIRE BRICK
- D. L.H.V. GUNNED
- E. ~~L.~~ H. GUNNED
- F. L. H. POURED
- G. L. H. FORMED AND POURED
- H. BURNER TILE
- X. REINFORCING STEEL SET
- J. LATH JOINT FAB. AND INSTALLING
- K. PLASTIC INSULATION LATH JOINTS
- L. SCAFFOLD
- M. TUBE SUPPORT CASTINGS PAINTED
- N. FLOOR PANELS ERECTED
- O. MATERIAL HANDLING
- P. CLEAN UP
- Q. MOVE IN - OUT
- R. TRAVEL
- S. UNALLOCATED SUPERVISION

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

THORPE	
APR 4 1968	
TCS	MPP
TDS	KJ
TH	IFT
MAS	VE
Job No. 2514	
WNCI	
JP	GW
LAK	WAB
ELB	DJT
JOB	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

Date April 4, 1968

Name of Job Casting of Heater Floor Slabs

Contract with Southwestern Oil & Refining Company - Corpus Christi, Texas

Location of Job Thorpe Houston Warehouse

Kind of Work Formed and Poured Castable Refractory

Customer's Order No. Contract

Person in Charge Jack Pelffer

Date When Job must be Started April 4, 1968 and Completed As Efficient

GENERAL INSTRUCTIONS:

Plans Attached YES

Mr. K. H. Reynolds:

Specifications Attached SEE BELOW

We have a lumpsum contract to install the refractory lining in 2 heaters for Southwestern Oil & Refining in Corpus Christi. As a part of this job, we are to furnish the pre-cast floor slabs for these heaters. We would like for you to handle the casting of these floor slabs here in our Houston Warehouse.

These slabs are as shown on the 2 drawings which I reviewed with you this morning. As we discussed, it appears to be advantageous to cast about 8 slabs at one time. The most important thing is to ensure that all slabs are square, even, and flat. It is also important that side notches for the eventual installation of soap fire-brick at the joints are installed properly. You will further need to ensure that all reinforcing steel is properly placed.

While you are fabricating the forms and setting up your casting bench, we will order the reinforcing steel, and stainless steel pick-up hooks. We will furnish you later with a bill of materials, and give you the quantity required for each slab. Materials will be ordered for delivery when you are ready.

Please work with Ed Brown on the casting space, and storage of the finished slabs. We would like to stack the completed slabs 4 to a pallet, with a 2 x 4 divider between each. Ed will probably want to store these slabs out in the yard, and they should be covered from the weather. Please secure any needed tools and equipment from Ed for this work.

The job is to be run on a straight time basis with scales as follow:

Yourself	\$5.625/hr
Bricklayer	\$5.00/ hr
Masontenders	\$3.175/hr

Continued.....

Signed _____

J T THORPE COMPANY
HOUSTON TEXAS

WORK ORDER

Date _____

Job No. _____

Name of Job _____

Contract with _____

Location of Job _____

Kind of Work _____

Customer's Order No. _____ Person in Charge _____

Date When Job must be Started _____ and Completed _____

GENERAL INSTRUCTIONS:

Plans Attached _____

Page 2

Specifications Attached _____

When the reinforcing steel arrives, please let me know and I will assist you in getting the proper spacing on the bars and installation of the bar support chairs for the first slab.

If you have any questions on this work as it progresses, please let me know. As I noted to you, this is a fill-in job and we may need to interrupt this operation from time to time.

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file

ALL BLUE PRINTS AND SPECIFICATIONS TO BE RETURNED
TO OFFICE UPON COMPLETION OF JOB.

Signed _____

March 29, 1968

Southwestern Oil & Refining Company
Drawer 809
Corpus Christi, Texas 78403

ATTENTION: Mr. F. E. Kemp, Purchasing Agent

REFRACTORY LINING OF TWO PLATFORMER HEATERS, AP-H1 AND AP-H2 -
SOUTHWESTERN OIL & REFINING COMPANY - CORPUS CHRISTI, TEXAS -
YOUR PURCHASE ORDER NO. 58037 - THORPE JOB 2514

We have received your order noted above, and thank you very much for this nice contract.

Our Bill of Materials for this job has been completed, and most items have been placed on order, particularly the long delivery items. We will maintain contact with your Mr. Doyle Williams to coordinate the field construction schedule.

We are instructing our Insurance Carriers to forward to you Certificates of Insurance covering this work.

It is our understanding that Berry Contracting, Inc., will perform the steel erection on this job. We have performed a number of jobs working in close conjunction with Berry Contracting in the past, and feel this experience will accrue to Southwestern's benefit on this job.

Again, we appreciate receipt of this order, and welcome the opportunity to once again be of service to Southwestern Oil & Refining Company.

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file

3-29-68 -

*Insurance Certificates
Have been Ordered Today.
Bernie*

THORPE	
MAR 29 1968	
FCS	MPP
FOS	KJ
TH	FT
MAS	WE
KCR	B
WNC	
JP	GW
LAK	WAB
MW	
ELB	DJT
JOB 2514	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	



March 19, 1966

Attention: Mr. Jack Peiffer

SUBJECT: Southwestern Oil & Refining Co.
Purchase Order No. 58037
Insulation of Heaters

Gentlemen:

In accordance with our telephone instructions of March 18, 1968 you are hereby authorized to enter Southwestern Oil & Refining Company's Purchase Order No. 58037. This order to cover labor and material to insulate two (2) heaters in accordance with UOP specifications and your proposal for a total lump sum of \$81,000.00.

We attach two copies each of the following:

<u>REQUISITION</u>	<u>REV.</u>	<u>DRAWING</u>	<u>REV.</u>	<u>SPEC.</u>	<u>REV.</u>
8664-R12	1	57316-F	3	211	8
-R26	1				
-R11	0	62602-F	1		
-R25					
-R18	0				
-R32	0				
-R17	0			293	5
-R31	0				
-R13	0	84908-J	0	296	6
-R27	0	84909-J	0		
-R16	0				
-R30	0				
-R15	0				
-R29	0				

(continued)

THORPE	
MAR 21 1968	
TCS	MPP
TDS	KJ
TH	FT
WAS	WE
1968	JB
W.C.	
W	GW
K	WAB
MW	
E:B	
JOB	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

J. T. Thorpe Company
March 19, 1968
Page 2

<u>REQUISITION</u>	<u>REV.</u>	<u>DRAWING</u>	<u>REV.</u>	<u>SPEC.</u>	<u>REV.</u>
8664-R14					
-R28					
-R39		68064-G	0	292	5
-R40		84913-A	0		
-R21					
-R35					
		84905-J	0		
		84906-J	0		
		84907-J	0		
		84840-G	0		

Proceed immediately to place your orders for the burner blocks and any other long delivery items.

We estimate that this work will be ready to begin about July 1, 1968. We will advise you as soon as we can establish a firm date.

Very truly yours,

UNIVERSAL OIL PRODUCTS COMPANY

W B Shaw

W. B. Shaw
Purchasing Department

WBS:lms
Attach.
Letter in duplicate

cc: Mr. Doyle Williams,
Southwestern (2)

PURCHASE ORDER

SOUTHWESTERN OIL & REFINING COMPANY

CORPUS CHRISTI, TEXAS

Date March 21, 1968

To J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Deliver To Southwestern Oil & Refining Company
Corpus Christi, Texas

1. Order No. MUST appear on all Invoices, Cases, Bundles, Packages and Correspondence.
2. Tag all items as indicated.
3. Invoice in TRIPLE.
4. Complete Packing and accompany PROSPECTION.

THORPE	
MAR 28 1968	
FCS	MRP
TH	KJ
WKS	WE
JCR	
WNCI	
AWW	
ELB	
JOB 231	GEN
JOB	PURCH
PROSPECTION	
GENERAL FILES	

ITEM	QUANTITY	ARTICLES	PRICE
		CONFIRMING ORDER	
		INSULATION OF HEATERS AP-H1 & AP-H2	
		Furnish all labor, materials, tools, equipment, scaffolding, insurance, payroll taxes, Texas State Sales Taxes, transportation, expense items and supervision to install refractory lining to two (2) platformer heaters in accordance with UOP Specifications and Drawings listed on attached letter dated March 19, 1968.	
			TOTAL \$81,000.00
		This order confirms UOP letter dated March 19, 1968 and is in accordance with your Proposal dated February 12, 1968 and addendum letter dated March 12, 1968, except price which was negotiated by phone.	
		Send insurance certificates to: Southwestern Oil & Refining Company Drawer 809 Corpus Christi, Texas 78403 Attn: Mr. F. E. Kemp	
		Work schedules to be arranged by contacting Mr. Doyle Williams of Southwestern Oil & Refining Company.	
	WBS/lws		

CONDITIONS

The right is reserved to cancel this order if not filled within the time and in accordance with the terms specified. All material subject to inspection and approval of buyer notwithstanding prior payment to obtain cash discount. Seller must pay all transportation charges both ways on rejected material. No charges allowed for boxing, packing or drayage unless otherwise agreed. Do not invoice material covered by more than one purchase order on an invoice. Separate invoices must be rendered on material covered by each purchase order. The vendor agrees that all requirements of the federal and state laws referring to employment and Labor Standards have been complied with in the production and manufacture of the material called for on this order. The Seller shall have provided Workman's Compensation and Public Liability Insurance and shall hold the Purchaser harmless from and against any and all damages suffered or done to any and all persons or property while engaged on the work covered by this order, in the event that any work is performed under this order. Unless otherwise agreed upon in writing the seller agrees to assume the defense of any suits for infringement of patents, brought against the buyer by reason of the use of these goods and to indemnify the buyer against any decree of costs in such suits. If these conditions are not acceptable please advise us upon receipt of the orders, and before you make shipment.

ORDER NO. 58037

By

F. E. Kemp
Purchasing Agent

VIA AIRMAIL

File Ref: 8664

March 19, 1968

J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. Jack Peiffer

SUBJECT: Southwestern Oil & Refining Co.
Purchase Order No. 58037
Insulation of Heaters

Gentlemen:

In accordance with our telephone instructions of March 18, 1968 you are hereby authorized to enter Southwestern Oil & Refining Company's Purchase Order No. 58037. This order to cover labor and material to insulate two (2) heaters in accordance with UOP specifications and your proposal for a total lump sum of \$81,000.00.

We attach two copies each of the following:

<u>REQUISITION</u>	<u>REV.</u>	<u>DRAWING</u>	<u>REV.</u>	<u>SPEC.</u>	<u>REV.</u>
8664-R12	1	57316-F	3	211	8
-R26	1				
-R11	0	62602-F	1		
-R25					
-R18	0				
-R32	0				
-R17	0			293	5
-R31	0				
-R13	0	84908-J	0	296	6
-R27	0	84909-J	0		
-R16	0				
-R30	0				
-R15	0				
-R29	0				

(continued)

J. T. Thorpe Company
March 19, 1968
Page 2

<u>REQUISITION</u>	<u>REV.</u>	<u>DRAWING</u>	<u>REV.</u>	<u>SPEC.</u>	<u>REV.</u>
8664-R14					
-R28					
-R39		68064-G	0	292	5
-R40		84913-A	0		
-R21					
-R35					
		84905-J	0		
		84906-J	0		
		84907-J	0		
		84840-G	0		

Proceed immediately to place your orders for the burner blocks and any other long delivery items.

We estimate that this work will be ready to begin about July 1, 1968. We will advise you as soon as we can establish a firm date.

Very truly yours,

UNIVERSAL OIL PRODUCTS COMPANY

W. B. Shaw
Purchasing Department

WBS:lms
Attach.
Letter in duplicate

cc: Mr. Doyle Williams,
Southwestern (2)



30 ALGONQUIN ROAD • DES PLAINES, ILLINOIS 60016

VIA AIRMAIL

March 19, 1968

File Ref: 8664

J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. Jack Peiffer

SUBJECT: Southwestern Oil & Refining Co.
Purchase Order No. 58037
Insulation of Heaters

Gentlemen:

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We attach two copies each of the following:

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8664-R12	1	57316-F	3 ✓	211	8 ✓
-R26	1				
-R11	0	62602-F	1 ✓		
-R25					
-R18	0				
-R32	0				
-R17	0			293	5 ✓
-R31	0				
-R13	0	84908-J	0	296	6 ✓
-R27	0	84909-J	0		
-R16	0				
-R30	0				
-R15	0				
-R29	0				

(continued)

U N I V E R S A L O I L P R O D U C T S C O M P A N Y

J. T. Thorpe Company
March 19, 1968
Page 2

<u>REQUISITION</u>	<u>REV.</u>	<u>DRAWING</u>	<u>REV.</u>	<u>SPEC.</u>	<u>REV.</u>
8664-R14					
-R28					
-R39		68064-G	0	292	5 /
-R40		84913-A	0		
-R21					
-R35					
		84905-J	0		
		84906-J	0		
		84907-J	0		
		84840-G	0		

Proceed immediately to place your orders for the burner blocks and any other long delivery items.

We estimate that this work will be ready to begin about July 1, 1968. We will advise you as soon as we can establish a firm date.

Very truly yours,

UNIVERSAL OIL PRODUCTS COMPANY

W. B. Shaw
Purchasing Department

WBS:lms
Attach.
Letter in duplicate

cc: Mr. Doyle Williams,
Southwestern (2)

fcs 9

3/18/68

Lab vs 516 gen

per Doyle Williams w/ S.W. O.I. -

It getting Lab for L.S. \$8,000 (L.M.)
(1986 cut std by JP from 555)

Williams will instruct UOP to
issue us an order today.

We'll probably get skirts & other work
(skirts $\approx$ \$4,000)

JP

3/18/68

Job vs 14 gm

p/c from B. W. Shaw @ UOP

~~UOP~~ SW P.O. # 58037

March 12, 1968

Universal Oil Products Company
30 Algonquin Road
Des Plaines, Illinois 60016

ATTENTION: Mr. W. B. Shaw, Purchasing Department

REFRACTORY LINING OF PLATFORMER HEATERS - SOUTHWESTERN OIL & REFINING COMPANY-
CORPUS CHRISTI, TEXAS - INQUIRY REFERENCE NO. 8664

We have received your letter regarding our proposal of February 12, 1968,
and offer the following comments and clarifications.

We have attached to this letter a list of the manufacturers and the quality
or brand of the various items of material figured in our proposal.

We list below our comments again keyed to the item numbers of our original
proposal.

1. We have included the asphalt mastic and the labor to paint the
embedded portion of all tube support castings.
2. We appreciate the reasoning behind your comments regarding
lining sequence, and will comply with that noted on the
drawings as qualified by your March 8 letter.
3. Upon reading Item 4 of our proposal again, we agree that it
would be difficult for one not knowing our mind to understand.
Your comments regarding this item expresses our intent very well.
5. The economies to be gained by using bulk Haydite are such that
we feel in the best interest of Southwestern to do so. Accordingly,
we will construct a temporary storage bin at the jobsite to prevent
loss of "fines". The Haydite will be moistened 24 hours prior to
using.

Continued.....

THORPE			
MAR 12 1968			
FCS			MAP
TDS	15		RE
TH			RE
MAS			WE
JCR			RE
WNC	CLAY		
JP			GW
LAK			WAB
MW			
ELI			
JOB			GEN
JOB			PURCH
JOB			D & E
PROSPECT	UOP		Southwest
GENERAL FILES			

Universal Oil Products Company
March 12, 1968
Page 2

8. We are agreeable to furnishing the burner tile. The alternate in our original quotation is for burner tile as noted on your requisitions R-12 and R-26 including spares, delivered to the jobsite in Corpus Christi. Installation of these tile was included in our original proposal base bid. The quality of these tile and the manufacturer is shown on the attached sheet.
10. In addition to furnishing and installing the V-Anchors, our original proposal also included furnishing, fabrication, and installation of the expanded metal lath at the panel joints per UOP Specification No. 296.
14. The rail siding at the jobsite is suitable and Thorpe will unload all refractory materials with no change in our quotation.

BY STEEL ERECTOR OR OTHERS

1. We had included the mastic for heater panel joints in our original proposal. This is still acceptable to us.

Our price is firm for completion prior to August 31, 1968, as stated in Paragraph 4 of our original proposal. We would expect that all materials would be purchased and delivered to the jobsite well in advance of that date, and therefore anticipate no material escalation on this job. Labor escalation would be applicable only if work continues beyond September 1. We would then expect to be reimbursed our cost for the differential between wages and benefits paid a given craft at that time, and those that would have been necessary on February 12, 1968, the date of our original proposal. Escalation would apply only to labor expended on or after September 1, and then only if a wage rate change had been introduced since February 12, 1968. We trust this clarifies the seeming contradiction between Paragraph 2 and 4 of our bid conditions.

Regarding job schedule, we would expect that both heaters could be completed in approximately 10 weeks, if steel erection was telescoped sufficiently. Our proposal is not based on performing lining of both heaters simultaneously, but we see no difficulty in maintaining approximately a two week time lag between the two heaters. Either of the heaters alone would require approximately 8 to 9 weeks by itself.

Continued.....

Universal Oil Products Company
March 12, 1968
Page 3

We are pleased that you find our proposal attractive, and again, hope to be favored with your order for this work.

We hope the foregoing has clarified the points of our proposal in question. As noted to you in our telephone conversation, we spent a considerable amount of time preparing our proposal in accordance with your specifications. Please rest assured that we have figured it accordingly, and propose to perform a firstclass job. As you will see from the attached sheet, all materials are of quality manufacture, and our original proposal is for a complete refractory setting of the two heaters.

Please let us know how we can serve you and our good customer, Southwestern Oil & Refining Company

J T THORPE COMPANY

JACK PEIFFER
JP/bg cc:file

In Duplicate

2cc: Southwestern Oil & Refining Company
Drawer 809
Corpus Christi, Texas 78403
Attention: Mr. Doyle Williams

J T THORPE COMPANY

ENGINEERS - CONSTRUCTORS

REFRACTORY, INSULATED AND ACID PROOF STRUCTURES

P. O. BOX 33399 MI 4-1247 HOUSTON, TEXAS 77033

Refractory Lining of Platform Heaters

Southwestern Oil & Refining Company
Corpus Christi, Texas

UOP REFERENCE NO. 8664

PROPOSED MATERIAL DATA:

<u>ITEM</u>	<u>MANUFACTURER</u>	<u>BRAND OR QUALITY</u>
Calcium Aluminate Cement	Universal Atlas (USS)	Lumnite
Haydite	Texas Industries	
Vermiculite	Texas Vermiculite	
Fireclay	Harbison-Walker Refractories Company	High Heat Duty Fire Clay
Firebrick	" " "	Coleman XX
Airset Mortar	" " "	Harwaco Bond
Burner Tile	" " "	Walsh XX
Block Insulation & Loose Mineral Wool	Johns-Manville	HT Banroc
Insulating Cement	" "	JM-500
Ceramic Fiber	Babcock & Wilcox	Kaowool
Mastic For Panel Joints	Eagle-Pitcher Company	Stelastic (Regular Grade)

Refractory Lining of Platformer Heaters

**Southwestern Oil & Refining Company
Corpus Christi, Texas**

UOP REFERENCE NO. 8664

PROPOSED MATERIAL DATA:

<u>ITEM</u>	<u>MANUFACTURER</u>	<u>BRAND OR QUALITY</u>
Calcium Aluminate Cement	Universal Atlas (US\$)	Lumnite
Haydite	Texas Industries	
Vermiculite	Texas Vermiculite	
Fireclay	Harbison-Walker Refractories Company	High Heat Duty Fire Clay
Firebrick	" " "	Coleman XX
Airset Mortar	" " "	Harwaco Bond
Burner Tile	" " "	Walsh XX
Block Insulation & Loose Mineral Wool	Johns-Manville	HT Banroc
Insulating Cement	" "	JM-500
Ceramic Fiber	Babcock & Wilcox	Keowool
Mastic For Panel Joints	Eagle-Pitcher Company	Stelastic (Regular Grade)



30 ALGONQUIN ROAD • DES PLAINES, ILLINOIS 60016

VIA AIRMAIL
File Ref: 8664

J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Attention: Mr. Jack Peiffer

SUBJECT: Southwestern Oil & Refining Co.
Insulation of Heaters
Your Proposal February 12

Gentlemen:

We have reviewed your proposal and list below our comments and items for clarification. Please check and advise promptly.

Please advise supplier and quality of brick, cement and block insulation you propose to use.

Exceptions and Clarifications. (We are using the same item numbers as listed on your proposal.)

- ok 1. This is to be done by Thorpe.^{gr} We assume this is not an exception. Please confirm.
- ok 2. We could not at this time determine whether or not you could leave off the entire hip lining until the tube bundle is installed.

We do not want to become involved in technical extras. We would place the order on the basis that you follow the sequence noted on the drawings. If it develops that it is impossible for you to finish these small areas around the tube supports while your crew is on the job, you would be excused, and Southwestern could complete this portion. It's too small to warrant extras, however, if the entire section is left out it becomes a major item. We expect you would cooperate and make an effort to complete the job.

(continued)

THORPE	
MAR 11 1968	
FCS	APP
IDS	KJ
TH	FI
MAS	W
JCR	JB
WNC	
JP	GW
LAK	WAB
AMW	
ELB	
JOB	C&W
JOB	P&CH
JOB	D & E
PROSPECT	410P
GENERAL FILES	SW

March 8, 1968

J. T. Thorpe Company
March 8, 1968
Page 2

- c- 4. This item is difficult to understand. We would prefer that you state, that with reasonable notice you are in a position to begin the job. When the job has begun, you will be allowed to complete both heaters without work stoppage due to erection schedule. If your proposal is based on a required sequence, please define.

We could not say at this time that if you determined to begin one heater on a specific day that you could do the same work or other work on the other heater the next day.

The starting date and sequence of work will have to be scheduled after delivery of steelwork. You can be sure of one thing, Southwestern will do everything possible to have the insulation crew in and out as soon as possible.

- ok 5. If bulk Haydite is used, you must furnish a storage bin at job site lined or so constructed to prevent loss of "fines". Also the Haydite must be moistened 24 hours before using.
- ok 6. Standard paper bags OK for Vermiculite. Protection is your responsibility.
- ok 7. Membrane Curing in accordance with manufacturer's recommendations and industry practice for this type work is acceptable.
- ok 8. We prefer that you furnish burner tile. Attached are two copies of burner tile requisitions and drawings. Supplier of tile to be one of those shown on the requisitions.
- ok 9. Top of foundation will be above grade.
- ok 10. Yes - insulation contractor to furnish and install V-Anchors as shown, also expanded metal lath at panel joints per UOP Spec. 296.
- ok 11. Yes (no comment).
- ok 12. Yes (no comment).
- ok 13. This is your option.

(continued)

J. T. Thorpe Company
March 8, 1968
Page 3

14. What is a reasonable distance to rail siding? You were at job site. Please determine whether the rail siding at Southwestern is suitable at the price quoted.

BY STEEL ERECTOR OR OTHERS:

1. All steel erection by others - mastic applied at this time and by erection crew. Please advise if you have included the mastic material in your proposal.

Refer to Requisitions 8664-R15 and R29. We could purchase this material if desired.

2. Chain links installed by stack fabricator.
3. Correct as stated.
4. Correct as stated.

BID CONDITIONS:

Please clarify price protection, the second and fourth paragraphs seem to contradict each other.

Please refer to the final paragraph of your proposal and advise best estimated time required to complete the actual field work after all material is on hand and job ready to begin.

We find your proposal attractive, however we want a first-class job and want to avoid any misunderstandings.

Please reply promptly as some materials are long delivery.

Very truly yours,

UNIVERSAL OIL PRODUCTS COMPANY

W B Shaw

W. B. Shaw
Purchasing Department

WBS:lms
Attach.
Letter in duplicate

cc: Mr. Doyle Williams,
Southwestern (2)



30 ALGONQUIN ROAD • DES PLAINES, ILLINOIS 60016

INQUIRY

To:

Date January 17, 1968

J. T. Thorpe Company
P. O. Box 33399
Houston, Texas 77033

Attn: Mr. Jack Peiffer

THE FOLLOWING REFERENCES MUST APPEAR ON ALL QUOTATIONS:

PROJECT: SOUTHWESTERN OIL & REFINING CO

UNIT: PLATFORMER

MATERIAL: INSULATION FOR HEATERS

REFERENCE NO. 8664

PLEASE SUBMIT QUOTATION IN TRIPLICATE FOR FURNISHING THE MATERIAL LISTED BELOW. IN ORDER TO RECEIVE CONSIDERATION YOUR QUOTATION MUST CONTAIN ALL THE INFORMATION ENUMERATED IN THE RIGHT HAND COLUMN. QUOTATION MUST BE IN OUR HANDS NOT LATER THAN JANUARY 30, 1968 WITH TWO ADDITIONAL COPIES MAILED TO SOUTHWESTERN OIL & REFINING CO., DRAWER 809, CORPUS CHRISTI, TEXAS 78403, ATTENTION MR. DOYLE WILLIAMS.

MATERIAL

Quote the following material in accordance with the attached copies of the UOP Co. Requisitions, Project Specifications, Drawings and/or Standard Specifications as listed below.

(SEE ATTACHED LIST)

THORPE	
JAN 19 1968	
FCS	MPP
IDS	KJ
TH	FT
MAS	WE
CR	JB
WIC	GW
JP	WAS
AW	
ELB	
JOB	GEN
JOB	FURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

lms

INFORMATION REQUIRED

1. Unit and extended prices for each item, and grand total F.O.B. your plant.
2. Complete specifications of equipment offered. Any exceptions to our specifications must be indicated in your quotation.
3. Best possible shipment from P.O. date.
4. Approximate shipping weight, each item.
5. Estimated freight to jobsite.
6. Number of calendar days after receipt of order required to submit certified shop drawings for approval.
7. Additional information required

Quote total lump sum price for all labor, material and freight.

Please immediately acknowledge receipt and confirm that you are in position to submit your quotation by the required day.

Attach.
cc Mr. Doyle Williams,
Southwestern (2)

Very truly yours,
UNIVERSAL OIL PRODUCTS COMPANY
W. B. Shaw
W. B. Shaw
Purchasing Department

403- Southwestern Oil 1/19/68

Jack - SP

Will you send please. OK

better get MW cracking on math's price.

We should see if we can get a discount somewhere so as to keep the best possible position on the math's.

DUE 1/30

1/30/68

UOP - Sw by Prospect

Corpus Christi heaters

Talked to B. J. Shaw w/ UOP -

Need to get better understanding of
Erection on heaters. Shaw says
best bet is to contact Williams
to get w/ Sw & then erectors.

No prob on add'l time for this price.

Take another week or 10 days if necessary.

Called Williams - w'll meet in

Corpus on 2/6 to discuss - He'll

Pull out Druggs & wonder if removed.

Said Williams better on items to be discussed.

1/22/68

MATERIAL Summary from UOP C/m for HTR: AP-H1 & AP-H2

	<u>AP-H1</u>	<u>AP-H2</u>		
Lumite	1055 SK	98✓	2	2037 SK
Hydite	2378 CF	✓✓✓✓	3	4642 CF
Vermiculite	3675 CF	3310	2	6985 CF
Fireclay	9680#	8945	1/3	18625#
2" HT Bricks	105F	16	-	1325F
2 1/2" Ser 1st Q101 Ser	25.8m	293m	6	55 1/2 m
- Soap	370	370	-	740 lbs
Dir Set	11,400#	12,800	1/2	24,200#
SEALASTIC	36 gal	35	-	71 gal.
Bo Cement	-	-	-	-
Insul Cement	800#	760#	-	1560#
Loose Soil	45K	45K	-	85K
Bulk Krowest	280#	230#	-	510#

Approx 1400

ck Cement-for du

Scaffold 3 days
S/B 2 days

Andrew Clark 10 days

Gravite 12 days

Brown Td 2 days

Flanbach 3 days

5 | 32
- 6

4/23/68

TDS TS

Southwestern Oilfield Co. Prospect
2 UOP HERRERS

Called Doyle Williams @ 883-8723

Says they will probably do something
on the job next week. Have
been waiting for other price.

Now looks like it might be July now
before job is ready to go, judging
from way Hester steel is coming
along.

I advised that I'd be glad to come down
if he had any questions. JJ

3/4/68 called Williams & Shaw - Still Active

No decision yet - offered to come up to UOP

& discuss job w/ them. Shaw said good, he'd keep in mind

THORPE	
FEB 12 1968	
FCS	MPP
TH	KJ
MAS	WE
JCR	JB
WNC	BMT
WAB	CC
ELB	
JOB	GEN
February 12 1968	
JOB	D & E
PROSPECT	
GENERAL FILES	

J T THORPE COMPANY

ENGINEERS - CONSTRUCTORS

REFRACTORY, INSULATED AND ACID-PROOF STRUCTURES

P. O. BOX 33399 MI 4-1247 HOUSTON, TEXAS 77033

Universal Oil Products Company
30 Algonquin Road
DesPlaines, Illinois 60016

ATTENTION: Mr. W. B. Shaw - Purchasing Department

SUBJECT: REFRACTORY LINING OF PLATFORMER HEATERS - SOUTHWESTERN OIL AND REFINING COMPANY - CORPUS CHRISTI, TEXAS - INQUIRY REFERENCE NUMBER 8664

We are pleased to submit our quotation for the above work in accordance with your inquiry dated January 17, 1968 and our discussions with Mr. Doyle Williams in Corpus Christi on February 6, 1968.

We propose and will agree to furnish all labor, materials, tools, equipment, scaffolding, insurance, payroll taxes, Texas state sales taxes, transportation, expense items, and supervision necessary to install the refractory linings in two platformer heaters at Southwestern Oil and Refining Company in Corpus Christi, Texas, in a complete and workmanlike manner, and in accordance with the following, terms, and specifications.

SPECIFICATIONS

The work upon which we quote is as shown on the UOP process division drawings and specifications furnished to us with the inquiry. However, we list below a few exceptions to the specifications, along with a number of clarifications having direct bearing upon the scope of work to be performed by Thorpe. This list of items applies to both the platforming charge heater AP-H1, and the platforming intermediate heater AP-H2.

BY J T THORPE COMPANY

1. Paint the imbedded portion of all tube support castings with an asphalt type mastic.
2. The erection sequence noted on the drawings requires insulation block-outs around several of the tube support castings. We propose to leave the lining off of the entire heater hip until the convection tube bundle is erected. The hip refractory would then be installed entirely.
3. Both stacks would be lined on the ground.

Continued....

HOUSTON

BEAUMONT

CORPUS CHRISTI

LOS ANGELES

4. Portions of both heaters would be under erection simultaneously, to allow the most efficient jobsite scheduling of men and materials. While we do not plan to work on both heaters in all phases simultaneously, our proposal is not based on completing one heater prior to start of any work on the other heater.
5. Our proposal is based on using bulk Haydite, delivered to jobsite via covered trucks. We do not include furnishing Haydite in paper lined burlap bags per the UOP specifications.
6. Vermiculite will be packed in the manufacturer's standard paper bag.
7. Our proposal is based on the use of membrane curing compound. We have not included a 24-hour water curing of the refractories, as we have no control of the erection schedule and have no way of knowing how much overtime would be involved. This method of curing refractory linings is in rather common use throughout the industry, and gives satisfactory results.
8. We have provided our alternate price for furnishing all burner tile necessary, but in any event have included the installation of these tile in our proposal.
9. We have based our proposal on the top of foundations shown on the drawings being approximately 1'-6" above grade.
10. Thorpe includes the furnishing and installation of all "V" anchors for the refractory linings.
11. Our proposal includes furnishing the reinforcing steel and pre-casting of the floor panels. We have included the subsequent erection of these panels, as well.
12. We note the convection coils are to be set on the center wall foundations temporarily and that lining of a portion of the heater would then proceed. During this period, we have included provisions for covering the coils with polyethylene sheet and tarpaulins to protect them from gunite. We would scaffold and work around this obstruction.
13. Our proposal is based upon several lower end panels being left off of each end of both heaters for access and efficient material handling during the construction of heater bridgewalls.
14. Unloading of refractory materials (our proposal assumes a rail siding within reasonable distance of the heaters).

Continued....

Universal Oil Products Company
February 12, 1968
Page 4

PRICE

Seventy Eight Thousand One Hundred Forty Four Dollars.....\$78,144.00

For Thorpe to furnish all burner tile, add..... 3,842.00

We appreciate very much the opportunity to submit our proposal. We hope to be favored for your order for this work, and once again have the opportunity to be of service to Southwestern Oil & Refining Company.

If awarded a contract for this work, all field work could be completed in approximately 14 weeks. We would suggest early placement of order for this work, so that long-delivery items may be placed in manufacture. We trust our proposal meets with your approval, but if you have any questions or if we can furnish you with any additional information, please let us know.

J T THORPE COMPANY

JACK PEIFFER
jp/mw cc: file 3

In Triplicate

2cc: Southwestern Oil & Refining Company
Drawer 809
Corpus Christi, Texas 78403

Attn: Mr. Doyle Williams

BY STEEL ERECTOR OR OTHERS

1. All steel erection, including mastic at the panel joints.
2. Chain link fence pickets in the stack.
3. All metal work such as bolting up of cast iron peep doors, installation of burners and related items, and installation of tube support castings. With the exception of refractory anchors and expanded lath panel dividers, Thorpe's work is basically that performed by masons and their helpers only.
4. Turning or cribbing of stacks as may be required for lining, temporary placement of panels and other components for lining, etc.

GENERAL

You will furnish free to us all utilities of power, water, hook-up and disconnect of our electrical equipment, conveniences for our men, and adequate working and storage space adjacent to the heater to be lined. Compressed air necessary for the pneumatic lining application has been included by Thorpe.

We plan to schedule our crews to work closely with your field erection forces for all phases of the work. As noted above, we anticipate being able to efficiently use our forces on the job, and our proposal is based on performing all work with one trip to the jobsite.

OUR BID IS CONDITIONED UPON

Our bid is conditioned upon a five-day work week with one eight-hour shift per day, availability of labor and materials at the time of installation, and existing labor rates and material costs at this date.

It is understood and agreed that additional compensation shall be paid by you to reflect increases in the cost of labor and/or materials above today's prices. The cost of overtime deemed necessary for the work, and the cost of delays or interference in the work not due to our fault will be for your account.

You will make payments before the 10th of each month of our invoice for 90% of labor expended and materials delivered during the preceeding month, and will pay the balance within 35 days thereafter.

Our price is firm for acceptance prior to March 15, 1968 and completion prior to August 31, 1968. Otherwise and thereafter, the above noted conditions of escalation shall apply.

Continued....

2/12

TDS - (Re: UOP - S.W. oil proposal)

It might be well to have someone check my extension on this est. ^{done}

for any gross miscalculation. Some of it was done w/ slide rule.

While quantities are less, I checked generally w/ UOP req. sheets.

Most of material loss factors have a basis in some previous job. Most, but not all, of the labor unit prices are based on analysis of previous job.

From experience on Ultraformer Bridge wall @ San Jose, I used Theoretical unit quantities on that item, i.e. 9" wall used 128 rather than 12.

MARY supposed to be getting typed 2/12.
(magic No. is on Pg 17) JP

1/29/68

UOP - Southwestern Oil & Ref. Prospects
Corpus Christi, Texas

Job Description Job consists of 14 m. to install
Lining in Two Heaters @ SW Ref - Corpus
Christi. Most of Job is built to LHV
But each Heater has Large Bridgewell (Firebox
Floor is Elevated and consists of Precast 14
Ponds reinforced w/ reinf Steel. (Job cast by)

A. AP-H1 Performing Charge Heater

1. Radiant Wall & Arch
2. Convection walls
3. Outlet Flue
4. Stacks
5. Bridgewell
6. Header Floor
7. Burner Tie
8. Header Bolos
9. Misc.

B. AP-H2 Performing Intermediate Heater

- 1 thru 8 D. to Above

1/29/68

(2)

UOP - SW joining HTRs

Takeoff:

A AP-H1 HEATER

1. RADIANT WALLS AND ARCH

Specs: 2" UOP V Anchor 8" c-c
Commercial S/B
5" 1:2:4 LHV
9" F&B Lateral End Walls 1st Qual.

γ S. Wall $16'-0" \times 6'-7'-10" = 2171 \cdot \phi$

γ Hips $7'-4" \times 6'-7'-10" = 995 \cdot$

γ End Walls $13'-11" \times 13'-10" = 385 \cdot$

2 γ $\times 1/2 \times 7'-0" \times 13'-10" = 97 \cdot$

3648 ϕ S/B Surface

$3648 \phi / .45 = 8107 \cdot$ 2" V Anchor

3648 $\phi \times 5/12 = 1520 \cdot$ CF 1:2:4 LHV CASTABLE GUNNED

2 Lateral Walls $2'-1" \times 13'-10" \times 9" (12) = 695 \cdot$ 9" F&B 1st Qual.

2. Connection Walls

Specs: S/B
2" V Anchor 8" c-c
5" 1:2:4 LHV

γ walls $9'-10" \times 6'-7'-10" = 1334 \cdot \phi$

γ $9'-10" \times 3'-5" = 67 \cdot \phi$

1401 ϕ S/B

$1401 \phi / .45 = 3113 \cdot$ 2" V Anchor

1401 $\phi \times 5/12 = 584 \cdot$ CF LHV GUNNED

1/29/68

(3)

UOP - SW Refining Heaters

A 3. Outlet Flue

Specs: S/B
1 1/4" V Anchor
3" 1:2:4 LH

✓ sides $3'-9" \times 67'-10" = 509.0$

✓ Ends $3'-9" \times 3'-9" = 28.0$

1 Roof $3'-9" \times 67'-10" = 254.0$

791.0 S/B

791.0 / 4 = 175.25 = 1 1/4" V Anchor

791.0 $\times \frac{3}{16} = 148.5$ CF LH ginned

4. Stack

Specs: S/B
Screw Pins & Washers gages 2" c-c
Chain Link pullets 6" c-c
1 1/4" 1:4 LH

2 ANCH $11'-4'-5" \times 14'-8" = 407.0$

4 ✓ $3'-3" \times 14'-8" = 191.0$

598.0 S/B gage

598.0 Chain Link Pallets

150. Thickness gage

598.0 / 4 = 149.5

598.0 $\times \frac{1 1/4}{16} = 134.5$

75. CF 1 1/4 LH ginned

1/19/68

(2)

UOP - SW of G Hwy

AJ. Bridge Wall

Spec: 1st Qid. FB Laid in Airset

10,350

1 wall section

6'-0" x 66'-11" x 18" (25)

10,349 FB (21.25)

1 -

4'-7" x - x 13 1/2" (19)

5888 ✓

3,926

1 -

- x - x 9" (12)

3925 ✓

20,162 FB

10/70

mortal = 20' m Fe x 4.5" / m = 8080. = Airset mortal

G. Floor

Spec: 5" thick 1" LH L.H. F.B.P.

Rein. w/ 1/2" dia Bars (-4)

1st Qid. 1st Qid. FB Soap

40 slabs

3'-4" x 4'-7" x 5 1/2"

= 755 CF 1" LH

40 x 9 = 360

4 Bars x 2'-9"

= 990 CF 1" LH

40 x 7 = 280

4.5

= 1120 ✓

38 Joints x 4'-7" x 0.9" = 231

9 x 2' x 24

15' Qid FB Soap

2110

1/29/68

(5)

UOP - SW Ref. 6. FORTEN

A.7. Border Tile

Spec: Border BLES d/ Borders
1st Qual FB Filler

60 Border Tile

74 m.k. E F.T. R. . .

74 SURCH 0'-9" x 1'-10" x 13" (18) = 1831. FB Rigid

8. Header Boxes

Spec: S/B
1 1/2" V Anchor 8'-0"
3" LF 1" C Rigid

L Side	4'-0" x 2'-0"	3V. 5
L 75'	4'-3" x 2'-0"	3V.
R Side	4'-0" x 2'-0"	3V.
		<u>98</u> 6 S/B

98 0/45 = 218. 1" V Anchor

98 6 x 3/12 = 25. 1" C LF Rigid

7. Michaelson

Paul & Linda
Knoxwood

Kno Wool Packing:

-49.

$$499.6 \times \frac{14}{12} = 31 \quad \text{CF} \times 8 \frac{1}{2} = 248.5$$

D. J. PERL

Sides

16	@	67'-10" =	1085.5	✓
26	@	33'-4" =	867	✓
End 12	@	14'-8" =	176	✓
10	@	23'-0" =	230	✓
			2358	✓

$2358 \text{ L.F.} \times 1'-0" = 2358 \text{ ft} \quad 1/2" \times 3.4" / \text{sq L.F.} \times 2358$

$$\leftarrow 2358 \text{ LA} \times 0.5 \times 1/12 = 97.45 \text{ CF in end corner}$$

LIOP-SW O.I. & Ref.
Corpus Christi

Summary AP-HI

	Pipes insul. K-80 wool Exp metal	1/8" surface	1 1/2" / 1" Androm	2" /	Char. Link Picty	Thick new layer	F.B. 6" (5m)	1/4" / Gunned	Exposed	1.42H	Exposed	Rein. Steel #4 bars	Buried T/h
1. Roof Walls & Arch		2648	8107				692	1540					
2. Cond walls		1401	3113					584					
3. Outlet Flue		791	1758					198					
4. Tracks		598			598	150			75				
5. Bridge wall							2016W						7
6. Floor							232 (Samps)				255	2110	
7. Business							1831						60
8. HOR. Sides		98	218						25				
9. Misc.	82 248 23500 6360		1976ps 11220ps 1980			(5040 2216055m) 23024		75CF 25CF 255CF			2110W	6015	

(8)
2/10/60

UOP - SUN Ref. HTR Prospect
Copper Chair

B. AP-H2 HEATER

1. Radiant Walls and Arch

Specs: 2" UOP 1" Anchor 8" c-c
Concl S/B
5" 1:2:4 LHV
9" F.B.P. lower end walls (1st Quad)

Same as AP-H1

3648 lb S/B Surface
8107 per 1" Anchor
1540 CF 1:2:4 LHV (castable)
692 yd 9" STR F.B.

2. Convection Walls

Specs: S/B
2" 1" Anchor 8" c-c
5" 1:2:4 LHV

2 walls	6'-2" x 67'-10" =	837.0
1	6'-2" x 3'-5" =	42.0
		879.0 S/B
<u>879</u>	$\div .45 =$	1953.2 2" 1" Anchor
<u>879</u>	$\phi \times 5/16 =$	367. CF LHV good

(9)
2/10/68

40P - SW Ref. Home Magazine

3. Out let - Floor

Specs: S/B
1 1/2" V. Pankon
3" 1:2:4 LHV

Same as AP-H1

7.91.6 S/B
1758 pcs 1 1/2" V. Pankon
198 CF LHV grout

4. Stair

Specs: S/B
1 1/2" 1:4 LH

2 Pankon 11' 4'-5" x 18'-4" = 509.6
4 ' 3'-7" x 18'-4" = 238.
747.6 S/B surf
93 CF 1:4 LH grout

5. Bridge wall

Specs: 1st Qid FB Laid in Airlet

Long wall same as AP-H1 - 20,162 FB
1 sec 6'-8" x 9'-8" x 18" (252) = 1,624.
1 - 4'-7" x 13 1/2" (192) = 868.
1 - 4'-7" x 9" (120) = 567.
23,221 FB
Mountain 23 1/2' m FB x 400 ft/m = 9280 ft Pankon mountain

(10)

2/10/68

40P - SW Ref G. HEATER

6. Floor

Specs: 5" THK 1:4 LH FLP
 Reinf. w/ #4 Bars
 JTS Filled w/ 15T Quad Loops (F.B.)

$$\begin{array}{rcl}
 8 \text{ slabs} & 4'-7" & 3'-4" = 12 \checkmark 6 \\
 20 & - & - > 3'-2" = 290 \\
 182 & 1 \checkmark & - \times 3'-6" = 186 \\
 & & \hline
 & & 598 \text{ sf} \times \frac{5}{12} = 249 \text{ CF 1:4 LH} \\
 & & 595 \times \frac{5}{12} = 248 \\
 40 \times 7 = 280 & \#4 \text{ Bars} \times 4'-2" = & 1167 \text{ LF } \#4 \text{ Bar} \\
 20 \times 9 = 180 & - \times 2'-11" = & 575 \text{ } \\
 20 \times 9 = 180 & - \times 2'-9" = & 495 \text{ } \\
 & & \hline
 & & 2187 \text{ LF } \#4 \text{ Bar}
 \end{array}$$

$$3.6 \text{ JTS} \times 4'-7" \text{ L} \div 0'-9" = \underline{220.9' \text{ F.B. Loops (2\%)}}$$

7. Burned Tile

Specs: Burned Brks.
 15T Quad F.B. F.16

50 Burned Tile

$$\begin{array}{rcl}
 24 \text{ sp. } 0'-9" \times 1'-10" \times 13\frac{1}{2}" & (18) & = 594 \text{ F.B. reg. } \\
 46 \text{ sp. } 0'-11" \times - & - & = 139 \checkmark \\
 & & \hline
 & & 1986 \text{ reg. F.B. F.16 reg.}
 \end{array}$$

8. Header Bars

Same as AP-#1

$$\begin{array}{rcl}
 98 \text{ sf } 5/8 & & \\
 218 & 1\frac{1}{2}" \text{ V anchor} & \\
 25 & \text{ CF 1:4 LH (Paved)} &
 \end{array}$$

⑪
1/10/68

UOP - SW Ref. Inc.

9. Miscellaneous

Same as AP-H1

248² Kool Wool Packing

2358⁴ 1/2" x 3.4⁵/sq. inch

82^{cf} insul cement

Summary - AP-H2

	Plas. Insul.	Kool Wool	Exp. Metal	S/S Slatex	1 1/2" V. Anchor	2" V. Anchor	9" Steel F.B.	LHV Gypsum	1:4 L.H.	Gravel	Poros	Formed & Poured	Reinf. Steel	Burned Tile
1. Red Walk Pad				3648		8107	692	1523						
2. Cont. Walls				879		1953		367						
3. Outlet flue				791	1758			198						
4. Stack				747						93				
5. Bridge wall							23,221							
6. Floor							220 (Jumps)					249	2187	
7. Burned Tile							1986							50
8. Hdr Baps					98	218					25			
9. Misc.	82	248	2358											
	22 ^{cf}	248 ²	2358 ⁴	61630	1978 ²	10,060 ²	25,049 ⁵	220,000 ²	2095 ^{cf}	93 ^{cf}	21 ^{cf}	249 ^{cf}	2187 ^{cf}	50 ^{sq}

(12)

2/10/68

UOP - South Eastern Oilfield P-ns
Corpus Christi

MATERIALS

	AP-H1	AP-H2	Total
PLASTIC INSULATION	82 CF	82	164 CF

$$164 \text{ CF} \times 20 \frac{\text{ft}}{\text{CF}} = 3280 \text{ ft}, \text{ use } \underline{3300 \text{ ft}}$$

KRO wool	248'	248'	496'
----------	------	------	------

$$496' \times 1 \frac{1}{2} = 595 \text{ ft}, \text{ use } \underline{600 \text{ ft}}$$

Expanded metal	2358 ϕ	2358 ϕ	4716 ϕ
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$$4716 \times 1 \frac{1}{2} = 4950 \phi \text{ use } \underline{4960 \phi} \quad (155 \text{ ft} \times 5 \text{ sheets})$$

Sand Blast Surface (S/B sand)	6536	6163	12,699 ϕ
----------------------------------	------	------	---------------

$$12,699 \phi \times 2 \frac{1}{6} = 25,398 \text{ use } \underline{260 \text{ SKS}} \quad \text{S/B sand}$$

V" Anchor	1 1/2"	1976	1976	3952
	2"	11,220	10,060	21,280

$$\begin{aligned} 3952 \times 1 \frac{1}{2} &= 4150, \text{ use } \underline{4150 \text{ 1 1/2"} } \\ 21,280 \times 1 \frac{1}{2} &= 22,340, \text{ use } \underline{22,400 \text{ 2"} } \end{aligned}$$

FB	9" STR (6% sev)	22,685	25,899	48,584
	Seeps	232	220	452

$$\begin{aligned} 9" \text{ STR} &= 48,584 \times 1.01 = 49,070 \\ 9" \text{ Seeps} &= 452 \times 1.01 = 484 \end{aligned}$$

(13)

2/10/68

UOP - Southwestern Oil Ref
Copper Chem.

<u>MAT'S Cont'd</u>	<u>AP-H1</u>	<u>AP-H2</u>	<u>TOTAL</u>
---------------------	--------------	--------------	--------------

1.24 LHV Gashed	730~	7085	4387 CF
-----------------	------	------	---------

$$4387 \times 1\frac{1}{5} = 6142 \text{ CF gross}$$

$$6142 / 45 = 1365 \text{ Batches}$$

on	1365 CF	Lumite	→
	2730 CF	Haydite	→
	5460 CF	Verhulite	→

1.4 LH Gashed	75	93	168 CF
---------------	----	----	--------

$$168 \times 1\frac{1}{5} = 252 \text{ CF gross}$$

or	63 CF	Lumite	→
	252 CF	Haydite	→

1.44 Paved Ref	280	274	554 CF
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$$554 \times 1\frac{1}{5} = 609 \text{ CF gross}$$

or	152 CF	Lumite	→
	609 CF	Haydite	→

(14)
2/10/68

UOP. SW Ref. -
Corpus

max 1/2 G id

LHV Summary

Lum. tile	-	1580	5x	✓
Hand. tile	-	3591	CF	✓
Verm. cul. tile	-	5460	CF	✓

Rein. Steel	AP-HI	AP-HV	Total
-------------	-------	-------	-------

	2110 LF	2187	4297 LF
--	---------	------	---------

4297 LF $\times$ 4 Bars @ .667" $\times$ 15' = 3009#

Use 3000#

Rein. Tile	-	160	50	110
				Not

Direct
Mount

8085*

9280*

17,360

$17360 \times 1.10 = 19096.0^*$

Use 19,100#

15
2/10/68

UOP - South Western Oil & Ref. Corpus Christi - Texas

Materials -

	3300 #	Jmson Plastic Insulation	@ 7 ⁵⁰ /sk =	495
	(645K)			
	600 #	B&W Bulk Kerosene	@ .85/# =	510
1/4	(103)	4960 # 1/2" x 3/4" sq Exp. metal	@ 15 ⁰⁰ /# =	744
	260 SKs	S/B Sand	@ 1 ⁰⁰ /sk =	260
	4.15m	1 1/2" UOP "V" Anchors	@ 33 ⁰⁰ /m =	137
	22.4m	2"	@ 36 ⁰⁰ /m =	818
5	49.1m	1st Qual. F.B. 9" str (2 1/2")	@ 174 ⁰⁰ /m =	8570
	.5m	Scrap	@ 162 ⁴³ /m =	81
2	1600 SK	Luminate	@ 41 ⁰⁰ /sk =	6624
TRUCK	145cy	Hay dirt	@ 18 ⁰⁰ /cy =	2610
1 1/2	1375 SK	VERMILITE	@ 13 ⁰⁰ /sk =	1898
	3000 #	Rein. Steel	@ 12 ⁰⁰ /# =	360
1	1 lot	Burner Tilt	@	*
1/2	95T	Air set metal	@ 132 ⁰⁰ /T =	1274
1/2	75T	Fireclay	@ 38 ⁰⁰ /T =	290
		Misc. Freight	@ 5 ⁰⁰	50
	75 gal	Eagle Pilder Siderite	@ .88/gal =	66
				24,78
		TAX (on \$18,163) 2%		363
				\$25,150

(55,241)

* 1 lot Burner Tilt @ \$3341 -
Quote as EXTRA

(16)

2/10/68

UOP - SW Oil & Ref. Proposal

Corpus Christi

LABOR

✓ 3	12, 699 lb	S/B	@ .10/lb	= 1,27
	25, 232 pcs	✓ Anchor Ins.	@ .13/ea	= 3,28
✓	492 m	F.B. Laid	@ .125/m	= 6,12
✓	4,387 CF	L.H.V. Gunned	@ 125/CF	= 5,48
✓	168 CF	L.H. Gunned	@ 3.00/CF	= 50
✓	50 CF	L.H. Panned	@ 2.00/CF	= 10
	504 CF	L.H. Formed & Panned	@ 2.50/CF	= 1,26
✓	2866 "	Rein. Steel Let	@ .10/lb	= 28
✓	110 sets	BURNER Tile Set	@ 8.50/ea	= 93
	62 CF	Knowerl JT. Packing	@ 5.00/CF	= 31
	4,716 LF	Lath Joints FABRICE	@ 25/LF	= 117
	4,716 lb	Plastic insd in Lath	@ 15/lb	= 70
✓	11,158 lb	Scaffolding	@ .20/lb	= 223
	700 ea	FIBER Support Cast. Painted	@ .50/ea	= 35
	80 ea	Floor Panels Erected	@ 9.12/panel	= 96
✓	11 CAR	UNloaded	@ 125	= 137
✓		Clean up	@ 5%	= 1318
✓		MOVE IN - OUT	@ 45	= 30
✓		TRAVEL 1.50 @ 45, 50 mi/hr		= 245
		(E. Roca way)		= 28,22

	Gun. 71	Subs	Brick	
CREW - 135 @	45 = 45	20	1 @ 45 = 45	20
1 B - @	40 = 40	10	5 @ 40 = 200	50
1 LF @	30 = 30	=	1 @ 30 = 30	
4 MT @	25 = 100	=	8 @ 25 = 200	
1 OE @	40	=	475	70/55
	255	1/55		= 142%
		= 12%		

Figure Avg 40

Crew = 70 ea

or 14 wk

vsa

(17)
2/10/68

UOP - Southwest Oil & Ref. Co. Corpus Christi Heater Proposal

Summary

MATERIALS	25,150
LABOR	28,221
IAT 15%	4,233
Subs 12%	3,387
BLADES 49 in @ 3/4	147
EQUIP	3,650
TRANSPORTATION 4000	132
TRUCK, MAINT - OUT 800 @ .25	200
	\$65,120 -
at 20%	13,024
	\$78,144 ←

of St. Francis Benedict,

$$\$3341 + 15 = \$3842 \text{ Add } \leftarrow$$

EQUIPMENT scaffold 200

A/C 3 mo @ 5.50 = 1650

2 1/2 in 1 mo @ 600 = 1200 X

Jet cutters etc 2 mo @ 300 = 600

Fuel 2500 @ 10/ton = 2500

TRUCK 14 wks @ 50 = 700

5/8 Bot 2 wks @ 50 = 100

\$3620

5 day → 3650

Apprent
50% of
equip

2/6/68

UOP. Southwest 017 & 016

Linings for 2 Headers

Items for Review w/ Doyle Williams -

1. ERECTION SEQUENCE

a. PAINT CASTINGS w/ MASTIC (282 lbs?)
Assume by IT ✓

b. ERECT PANELS, by others
MASTIC JTS, by IT? No, by Erector

c. RE: ERECTION NOTE 6, Which PANELS
must be left out? End only

d. Re: Erection Note 7, INSULATE END PANELS
before Erection? Before Sides? ✓

e. Re: Note 8 INSULATION BLOCK outs? ✓
Also Note 10 & 13
Erection of walls.

f. How IS-ALL Floor Panels? More Is-ALL P.
No Prob

g. Stacks lined on ground? ✓
yes

h. Both Headers @ one time?

yes

2/6/68
(5)

UOI? for the proposed

$\frac{4700}{28000}$

Job Review of Williams (cont'd)

2. Materials -

a) Haydite in paper bags, not bulk
Potential Savings - Canned Trench
Bulk

b. Vermiculite in std. mfg paper bag

c. It would like to figure curing compound
OT paid for 24 hr water care
& It does not control schedule
✓

d. Who furnishes burner tile? It?

if so, need drawing ^{Quoted} possible

2/6/67
(3)

UOP - Site - R Report

Job Review w/ Williams

3. GENERAL -

a. Assume top of Edw Approx ~~X~~
Above ground? 1'-6"

b. LK Welding of Anchor H?
C.L. Pickets? LK FAB? Dray

Confined on this ~~By others~~

JK from E.I.N.T. "J" Anchor
C.L. B. FAB.

c. Necessary to Work Around

Correct in coil? yes.

Notes

① If not figuring hydro in paper level
basal bogo - paper only.

② Verticality placed in in factum
stand and paper bog.

③ Army Compound figured - Difficulties
of Cric OT for vt for water wing.
It does not control the schedule.

④ Bureau T/L Not by JC

⑤ States on ground

⑥ Assume Top of floor not one 6' off ground

⑦ Elevation Sequence?

⑧ Do ch JC welding anchors

⑨ Both heaters @ One time?

⑩ Bureau Floor Elevation Sequence - big when?

⑪ Impulse fpp' in - to panel - action?

⑫ Conversion coil in heater @ firing time?

2/9/68

UBP- SW Oil & Ref.

Brooks suggests do entire trip
After Conv. Trucks Are Erected.

No Break outs.

Leave End Panels off for Access to get brush
in & Replaced ~~off~~ out.

WESTERN UNION

SENDING BLANK

CALL LETTERS **ST** **FWB** **PD** CHARGE TO **HOUSTON, TEXAS** **1-30-68**

UNIVERSAL OIL PRODUCTS COMPANY
MR. W. B. SHAW
30 ALGONQUIN ROAD
DES PLAINES, ILLINOIS

RE PLATFORMER HEATER REFRACTORY LININGS, SOUTHWESTERN OIL
& REFINING, 8664. HAVE MEETING SCHEDULED IN CORPUS CHRISTI.
ON 2-6-68 WITH MR. DOYLE WILLIAMS TO REVIEW ERECTION SEQUENCE,
ETC. WE WILL FORWARD PROPOSAL SHORTLY THEREAFTER.

PEIFFER - J T THORPE COMPANY

Send the above message, subject to the terms on back hereof, which are hereby agreed to

PLEASE TYPE OR WRITE PLAINLY WITHIN BORDER—DO NOT FOLD

THORPE	
JAN 30 1968	
FCE	MPP
TDS	KJ
TH	FT
MAS	WE
JCR	JB
WNC	
JP	GW
LAK	WJ3
MW	
ELB	
JOB	GEN
JOB	PURCH
JOB	D & E
PROSPECT	
GENERAL FILES	

45-
15-15

1/15/68

South Western Dra. Prospect
Corpus Christi, Texas

Talked to mr. W. B. "Bill" Shaw

w/ UOP in Das Palmas Re.

S.W. Don Ludwig is ing. prob.

Thomas. (L.O. or L & M) He

prefers L & M

Asked him what else they had we
could work w/ UOP on. He said

"I understand you folks work w/
S.W. Refining on that work. Do me
a good job on the Heater quote,
and you can stay right there & do
Skirts, Pipe racks etc."

1/15/68

S.H. Project

Then called Doyle Williams @
S.W. in Corpus. Told her I'd

talked to Sher & would prob
get him out skid quote soon.

Said, No hurry 25th ok.

2 - 15' 6" ϕ x 12' high skids have
grown to 16' 0" high.

No change w others.

(purchased 1/2 doz. of
3" series F.B. ck
Ths.)

1-29-68

208 2248

LABOR BREAKDOWN WALL

Date	Hours	Rate	Amount
1-5-67	8 hrs @	3.025	24.20
1-6	4	5.30	466.80
	4	5.05	370.60
	12	4.80	51.53
	4	3.025	466.80
	28	2.65	370.60
1-10	8	5.30	466.80
	8	5.05	349.40
	48	4.80	
	8	3.55	524.40
	8	3.025	370.60
	56	2.65	
1-11	8	5.30	
	8	5.05	
	14	4.80	
	8	3.55	
	8	3.025	
	88	2.65	
			3,458.73
1-12	80 hrs	390.00	
	112 hrs	314.20	
1-13	22 hrs	92.43	
1-16	10	5.30	
	8	5.05	
	80	4.80	
	8	3.55	
	8	3.025	
	88	2.65	
			763.20
			2,959.33
			6,418.06
			6418.06 ÷ 692 =

1-29-68

JOB 2421 G.F.M.

Healer labor breakdown

Class	A ^{main} _{or}	B Scaff	D ^{low} _{stair}	H ^{climb}
BS 5.40	1 = 5.40	10 = 54.00	98 = 529.20	7 = 37.80
BM 4.80	—	11.5 = 55.20	82 = 393.60	—
LF 3.70	1 = 3.70	8 = 29.60	112 = 414.40	15 = 55.50
MT 2.60	2 = 5.20	41.5 = 107.90	200 = 520.00	113 = 293.80
CF 4.30	—	—	2 = 8.60	—
CE 4.05	—	—	2 = 8.10	—

TOTALS 14.30 246.70 1,873.20 387.10
81/ck

TOTAL 2,522.00

4439.5 Scaffold @ .12/lb 532.74
 730.5 of Scaff @ 1.25/cf (net) 913.13
 219. Paved @ 1.00/cf 219.00
 85. Tilt @ 10.00/cf 850.00
 Cleary 1.00 1.00
 move in out 200.00
 Tilted 17.50
 4171

1/5 + 1/6

1/10 + 1/11 entire crew

1/12, 13, 16-20
entire crew

Berry Contracting, Inc.
Coastal States Petrochemical Company
Corpus Christi, Texas

Job 2421

TASK LIST

- A. Move in - out
- B. Scaffolding
- C. Sand-blasting
- D. LHV shooting
- E. LHV pouring
- F. Sand-cement shooting
- G. Concrete curing compound
- H. Clean-up

Please enter a letter after the scaffolding, LHV shooting, curing compound and cleaning to denote whether the work is for the heater (H), reactor (R) or the fireproofing (F).