Scanning
Row 22429
Seg 13233
TWW

BJH
4/2/2013

In Reply Refer To: GE 1035A

Ms. Jennifer Johnson
ATP Oil & Gas Corporation
4600 Post Oak Place
Suite 100
Houston, Texas 77027

Dear Ms. Johnson:

This office has reviewed your completion report for the following pipeline:

Application Type: New Right-of-Way Pipeline
Letter Date: March 7, 2003
Supplemental Data Date: August 23, 2005

Segment Number	ROW Number	Size (inches)	Length (feet)	Service	From	To
13233	G22429	12	288,867	Bulk Gas	SSW No.01 Mississippi Canyon Block 348	SS MANIFO JP Main Pass Area, South and East Addition Block 261

The total length of the "as-built" right-of-way is 54.71 miles.

The report is submitted in accordance with 30 CFR 250.1008 (b).

The data provided in the report establishes the assigned maximum allowable operating pressure (MAOP) for the pipeline:

MAOP (psig)	MAOP Determination
5872	Pipeline Design

The high and low-pressure sensors shall be set no higher than 15 percent above and below the normal operating range, respectively. The high pilot, however, shall not be set higher than the MAOP of the pipeline. The pressure range shall be established by the use of pressure recorders.

Sincerely,

(org. sgd.) B. Hunter

Nick Wetzel
Regional Supervisor
Regional Field Operations

bcc: 1502-01 Segment No. 13233, ROW OCS-G22429 (GE 1035A)
1502-01 ROW OCS-G22429 (Scanning) (GE 274A)

BHunter:JMarchese:ttg:10/24/2012: ATP Oil-13233

Total E&P USA Inc.

File

August 23, 2005

Angie D. Gobert
Staff Petroleum Engineer
Office of Field Operations
Pipeline Section
1201 Elmwood Park Blvd.
MS 5232
New Orleans, LA 70123-2394

Re: CANYON EXPRESS SEGMENT NO.13233 HYDROSTATIC TEST RECORD

Angie:

Segment No.13233 has been hydrostatically tested offshore as part of the 12-inch flowline system (along with segments No.13234 and 13250). The results of the hydrotest are summarized below.

Hydrotest Date	Hydrotest Time	Minimum Hydrotest Pressure	Location of the Hydrotest
08.25.2002	8hr 30min	7488	Offshore

The tested length of the flowline system is 580800 ft (110 mi) and is comprised of 288867 ft (54.70 mi) of segment No.13233, 291993 ft (55.30 mi) of segment No.13234, 78 ft (0.01 mi) of segment 13250 as well as lengths of risers and tie-in spools.

Sincerely,

Daria Bougai
INTEC ENGINEERING
Senior Engineer

TOTAL
800 Gessner, Suite 700, Houston, TX 77024
Tel: (713) 647-3000 – Fax: (713) 647-3003

Total E&P USA Inc.

August 23, 2005

Angie D. Gobert
Staff Petroleum Engineer
Office of Field Operations
Pipeline Section
1201 Elmwood Park Blvd.
MS 5232
New Orleans, LA 70123-2394

Re: CANYON EXPRESS SEGMENT NO.13233, 12" EAST BULK GAS FLOWLINE AS-BUILT RECORD (MC 348-1 TO MP 261 JP)

Angie:

Segment No.13233 has been installed in two sections, shallow and deep by different contractors. As a result, two sets of as-built drawings exist for the Segment. The shallow section of Segment 13233 is found in drawing set entitled "As-Built 12" (East) Bulk Gas Flowline a Portion of MMS *Segment No.13233 'Canyon Express'", Sheets 1 through 9. The shallow section as-built records are* found in Book 130 of the FIC As-Built Documentation.

The deep section of Segment 13233 is found in drawing set entitled "As-Laid 12" (East) Pipeline Survey Mississippi Canyon Block 348 Well No.1 East Sled to Viosca Knoll Block 736 End of Pipe Segment No.13233 Surveyed Length 259,309ft'", Charts 1 through 12. The deep section as-built records are found in Book 133 of the FIC As-Built Documentation.

Segment summary information including Segment location, as-built length, MMS-approved length, as well as reason for discrepancy in the lengths is presented in table below.

ROW#	P/L Seg#	Size	Line Type	Origin	End	MMS-Appr. Length	As-Built Length	Explanation for Length Difference
22429	13233	12"	Bulk Gas	MC 348#1	MP 261JP	287,973'	288,867'	Change of 177-2 well location. Approved by MMS in 02/01/02 letter

Sincerely,

Daria Bougai
INTEC ENGINEERING
Senior Engineer

TOTAL
800 Gessner, Suite 700, Houston, TX 77024
Tel: (713) 647-3000 – Fax: (713) 647-3003

Total E&P USA Inc.

August 23, 2005

Angie D. Gobert
Staff Petroleum Engineer
Office of Field Operations
Pipeline Section
1201 Elmwood Park Blvd.
MS 5232
New Orleans, LA 70123-2394

Re: CANYON EXPRESS SEGMENT NO.13233, 13234 and 13250 HYDROSTATIC TEST RECORD

Angie:

Segments No.13233, 13234 and 13250 have been hydrostatically offshore as part of the flowline system (along with segments risers and tie-in spools). The results of the hydrotest are summarized below.

Hydrotest Date	Hydrotest Time	Minimum Hydrotest Pressure	Location of the Hydrotest
08.25.2002	8hr 30min	7488	Offshore

The tested length of the flowline system is 580800 ft (110 mi) and is comprised of 288867 ft (54.70 mi) of segment No.13233, 291993 ft (55.30 mi) of segment No.13234, 78 ft (0.01 mi) of segment 13250 as well as lengths of risers and tie-in spools.

Sincerely,

Daria Bougai
INTEC ENGINEERING
Senior Engineer

TOTAL
800 Gessner, Suite 700, Houston, TX 77024
Tel: (713) 647-3000 – Fax: (713) 647-3003

Total E&P USA Inc.

August 25, 2005

Angie D. Gobert
Staff Petroleum Engineer
Office of Field Operations
Pipeline Section
1201 Elmwood Park Blvd.
MS 5232
New Orleans, LA 70123-2394

Re: CANYON EXPRESS MMS PIPELINE SEGMENT APPROVALS - SUBMITTED INFORMATION SUMMARY

Angie:

Submitted in this package is the information requested by your agency in your August 03, 2005 e-mail. Per your request, the as-built drawings have been separated into 18 folders – one for each letter of approval by MMS. Each folder contains the following information (where applicable): as-built cover letter summarizing the location of the Segment/s, its size, MMS-approved length, as-installed length and explanation for discrepancies in lengths; as-built drawings; hydrostatic test cover letter summarizing hydrotest date, time, minimum hydrotest pressure and testing location (to be added to the hydrostatic test records as part of previously submitted Books No.134 and 135A). For your convenience, the information listed above is also presented in electronic format.

Eighteen (18) copies of the Field Arrangement Drawing with pipeline segments identified have been submitted for your information. For summary of the as-built and the MMS-approved lengths and explanation of the differences, please refer to the "Canyon Express As-Built Information Summary Table".

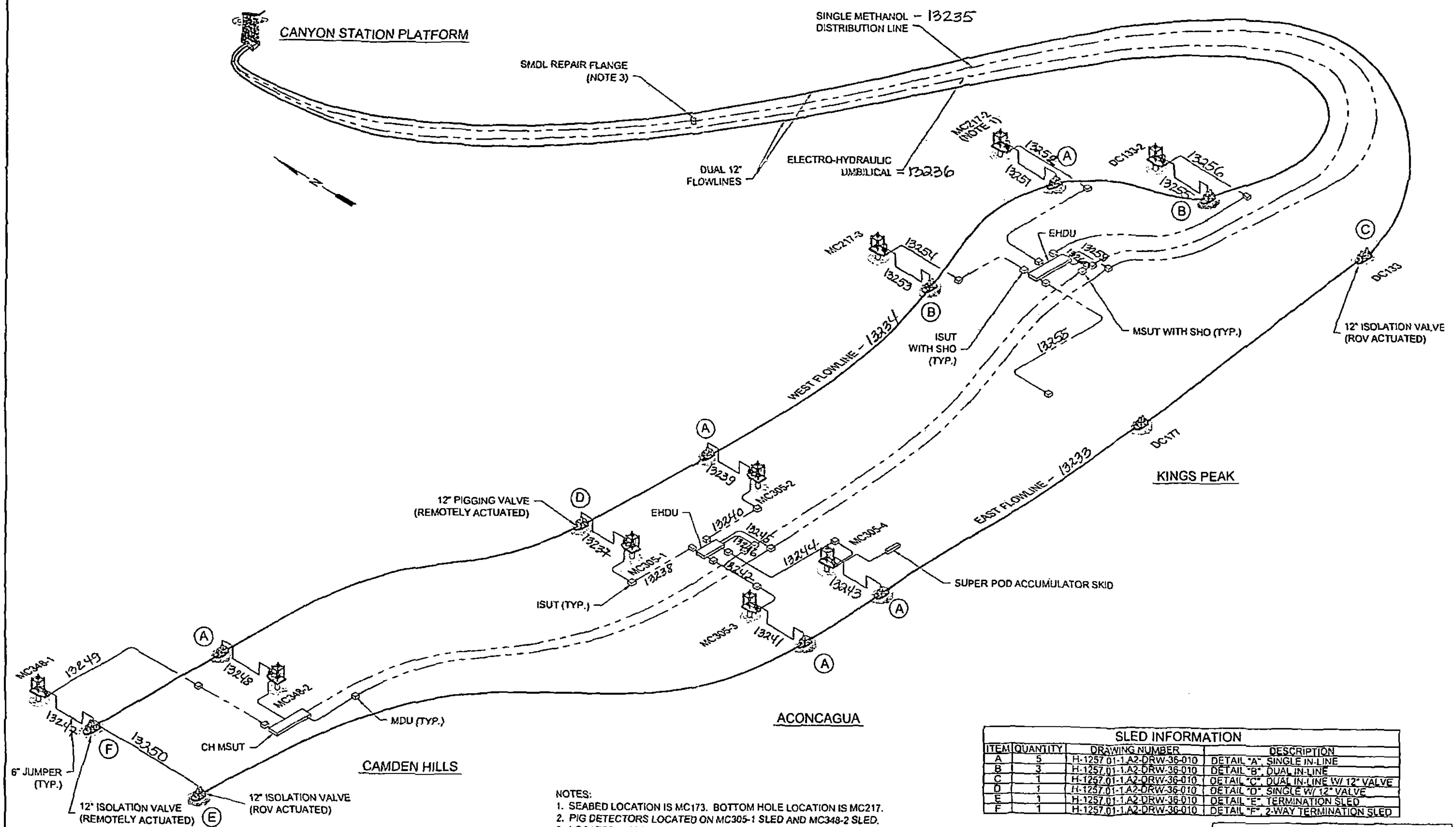
Please be advised that certified as-built drawings for Segment No. 13233 (12 inch Bulk Gas Flowline) and Segment No. 13234 (12 inch West Bulk Gas Flowline) have been submitted to MMS in Book No.130 and Book No.133. The pipelines have been installed in two sections, shallow and deep, by two different installation contractors. As a result, the as-built drawings submitted are separated into shallow section (Book No. 130) and deep section (Book No.133). Each book contains appropriate section of Segment No. 13233 and 13234. In order to separate the as-built drawings into sections suitable for filing by your agency, it shall be necessary to combine the shallow and deep Segments. For example, Segment No. 13233 is a combination of shallow section (Sheets 1 through 9 found in Book 130) and deep section (Charts 1 through 12 found in Book 133).

Should you have any questions/comments to the information submitted, please do not hesitate contacting myself at (281) 925-1547.

Sincerely,

Daria Bougai
INTEC Engineering
Senior Engineer

TOTAL
800 Gessner, Suite 700, Houston, TX 77024
Tel: (713) 647-3000 – Fax: (713) 647-3003



NOTES:
1. SEABED LOCATION IS MC173. BOTTOM HOLE LOCATION IS MC217.
2. *PIG DETECTORS LOCATED ON MC305-1 SLED AND MC348-2 SLED.*
3. LOCATED IN VK825. DISTANCE FROM CANYON STATION ~ 10.9 MILES (57,574 FEET).

SLED INFORMATION			
ITEM	QUANTITY	DRAWING NUMBER	DESCRIPTION
A	5	H-1257.01-1.A2-DRW-36-010	DETAIL "A", SINGLE IN-LINE
B	3	H-1257.01-1.A2-DRW-36-010	DETAIL "B", DUAL IN-LINE
C	1	H-1257.01-1.A2-DRW-36-010	DETAIL "C", DUAL IN-LINE W/ 12" VALVE
D	1	H-1257.01-1.A2-DRW-36-010	DETAIL "D", SINGLE W/ 12" VALVE
E	1	H-1257.01-1.A2-DRW-36-010	DETAIL "E", TERMINATION SLED
F	1	H-1257.01-1.A2-DRW-36-010	DETAIL "F", 2-WAY TERMINATION SLED

ORIGINAL DRAWING WITH SIGNATURES ON FILE

REF No	REFERENCE DRAWING TITLE	DRAWING No	REV	DESCRIPTION	DATE OF ISSUE	REV'D BY	CHK'D BY	PROJ MGR	CLIENT APPROVAL
1	FIELD ARRANGEMENT ALTERNATE CASE 9 CAMDEN HILLS/ACONCAGUA/	H-1257.01-1.A2-DRW-36-008	A	ISSUED FOR INTERAL REVIEW	4-22-05	MR	KGC	BMG	
	KINGS PEAK		B	ISSUED FOR CLIENT REVIEW	5-12-05	MR			

TOTAL

TOTAL E&P USA, INC

	DRAWN	CHECKED	ENGINEER	CLIENT
BY	MR			
DATE	4-22-05			
SCALE AT "B" SIZE	NONE	PRINTED		

INTEC ENGINEERING

CANYON EXPRESS
FIELD ARRANGEMENT - OPERATIONAL
CAMDEN HILLS/ACONCAGUA/KINGS PEAK

H-1257.02 - 3.43 - DRW - 00 - 001 - B
PROJECT NUMBER CTR TYPE GROUP NUMBER REV

Canyon Express As-Built Information Summary Table

Lease Term Lines

P/L Seg#	Size [inch]	Line Type	Origin	End	As-Built Document/Drw #	MMS Approved Length [ft]	As-Built Length [ft]	Length Difference [ft]	% Change	Reason for Difference in Length
13237	6	Jumper	MC 305#1	MC 305 AWS	Sonsub400206-5-REP-305-1	60	67	7	12	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
13238	5	Umb.	MC 305 EHDU	MC 305 #1	A-190070-42-17-405	4265	4779	514	12	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
13239	6	Jumper	MC 305#2	MC 305 AWS	Sonsub400206-5-REP-305-2	60	69	9	15	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
13240	5	Umb.	MC 305 EHDU	MC 305 #2	A-190070-42-17-406	4410	4937	527	12	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
13241	6	Jumper	MC 305#3	MC 305 AES	Sonsub400206-5-REP-305-3	60	62	2	3	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
13242	5	Umb.	MC 305 EHDU	MC 305 #3	A-190070-42-17-407	1859	2266	407	22	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
13243	6	Jumper	MC 305#4	MC 305 AES	Sonsub400206-5-REP-305-4	60	56	-4	-7	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
13244	5	Umb.	MC 305 EHDU	MC 305 #4	A-190070-42-17-408	3110	3735	625	20	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
13245	1	Meth.	MC 305 EHDU	MC 305 MSUT	A-190070-42-17-502	100	140	40	40	Length greater than needed, but identical to Segment 13246 was ordered for installation purposes.
13246	1	Meth.	MC 305 EHDU	MC 305 MDU	A-190070-42-17-502	146	140	-6	-4	Length found to be sufficient for installation.

ROW Lines

ROW#	P/L Seg#	Size [inch]	Line Type	Origin	End	As-Built Document/Drw #	MMS Approved Length [ft]	As-Built Length [ft]	Length Difference [ft]	% Change	Reason for Difference in Length
22429	13233	12	Bulk Gas	MC 348 #1	MP 261 JP	Pipeline Inspection Survey 12" Bulk Gas Pipeline "East" (MMS Segment No.13233) Sheets 1-9 of Book 130, Sheets 1-12 of Book 133	287973	288867	894	0	Change of well location. Permitted by MMS on 2/1/02.
-	13258	5	Umb.	DC 177 EDHU	DC 177 #2	A-190070-42-17-404	13274	14212	938	7	Change of well location. Permitted by MMS on 2/1/02 under 13233 application.
22430	13234	12	Bulk Gas	MC 348 #1	MP 261 JP	Pipeline Inspection Survey 12" Bulk Gas Pipeline "West" (MMS Segment No.13234) Sheets 1-9 of Book 130, Sheets 1-12 of Book 133	290778	291993	1215	0	The pipeline was dropped during installation. It was then picked up and re-installed thus increasing in length.
22431	13235	2	Meth.	MP 261 JP	MC 348 #2	A-190070-42-17-(301 through 313)	277825	277927	102	0	Change of well location. Permitted by MMS on 2/1/02 under 13233 application.
-	13236	6	Umb.	MP 261 JP	MC 348 #2	A-190070-42-17-(201 through 213)	277543	289259	11716	4	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
22432	13247	6	Jumper	MC 348 #1	MC 348 CHWP	Sonsub400206-5-REP-348-1	60	48	-12	-20	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
22433	13248	6	Jumper	MC 348 #2	MC 348 CHES	Sonsub400206-5-REP-348-2	60	55	-5	-8	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
-	13249	5	Umb.	MC 348 #2	MC 348 #1	A-190070-42-17-409	6520	7044	524	8	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
22434	13250	12	Jumper	MC 348 CHWP	MC 348 CHEP	Sonsub400206-5-REP-348-PL-E	66	78	12	18	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
22435	13251	6	Jumper	MC 173 #2	MC 173 KPWS[1)]	Sonsub400206-5-REP-217-2	60	78	18	30	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
-	13252	5	Umb.	DC 177 EDHU	MC 173 #2	A-190070-42-17-402	9184	9887	703	8	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
22436	13253	6	Jumper	MC 217 #3	MC 217 KPWS	Sonsub400206-5-REP-217-3	60	59	-1	-2	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
-	13254	5	Umb.	DC 177 EDHU	MC 217 #3	A-190070-42-17-403	11220	12217	997	9	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
22437	13255	6	Jumper	DC 133 #2	DC 133 KPWS	Sonsub400206-5-REP-133-2	60	49	-11	-18	Jumper fabricated based on field measurements. MMS-approved lengths are best estimates.
-	13256	5	Umb.	DC 177 EDHU	DC 133 #2	A-190070-42-17-401	5913	6478	565	10	Length of umbilical greater than needed was purchased for contingency reasons. Since umbilical cannot be spliced, the whole length was installed.
22438	13257	6	Jumper	DC 177 #2	DC 177 KPES		60				The jumper was not installed due to change of well location.
22439	13259	1	Meth.	DC 177 EDHU	DC 177 MSUT	A-190070-42-17-501	131	120	-11	-8	Length found to be sufficient for installation.
22440	13260	1	Meth.	DC 177 EDHU	DC 177 MDU	A-190070-42-17-501	91	120	29	32	Length greater than needed, but identical to Segment 13259 was ordered for installation purposes.

Notes:

[1)] Seabed location is MC173. Bottom hole location is MC217.

14. FINAL CLEANING/ GAUGING/ TESTING

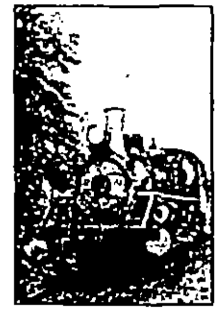
SaiBOS subcontracted Weatherford for the final cleaning/ gauging/ hydrotesting of the flowlines system.

The final cleaning/ gauging/ hydrotesting of the flowlines system was witnessed and accepted by the final Client (CEPT) on the August 22nd, 02 (cleaning/ gauging) and August 26th, 02 (hydrotesting). Refer to Acceptance Certificates.

14.1 Logs/ Charts

Weatherford

Pipeline & Specialty Services



Customer: **SaiBos**

Project Title: Pigging and Hydrostatic Testing Certification Report
110 Miles of 12-inch Gas Export Pipeline (Loop)

Department: Hydrotesting & Pipeline Services

Rev. No.	Distributed to:	Distribution date:		Classification: Non-Confidential		
A1	Submitted to Customer	28Aug02	PWH			
Revisions		Date	Orig.	Chk.	Internal Appr.	Client Appr.

Hydrostatic Test Certification, Report and Charts

HYDROSTATIC TEST REPORT

SAIBOS
CANYON EXPRESS
MP 261

WEATHERFORD PIPELINE & SPECIALTY SERVICES
LAFAYETTE, LOUISIANA

PRIME CONTRACTOR
SAIBOS

DATE OF TEST
AUGUST 25, 2002

REPORT CERTIFIED BY:

Patrick W Hollier

PATRICK HOLLIER
PROJECT ENGINEER

Weatherford
Drilling & Intervention Services

Pipeline & Specialty Services
308 Pinehurst St. Lafayette, LA 70508
Phone 337-291-9232 Fax 337-291-9277

Hydrostatic Test Report

Company: Saibos

Line: Canyon Express Location: MP 261 Job No. PS-0216 Length: 580,800 ft.

Line Size: O.D. 12.75 Wt. 0.800 Gr. ______ Sta/M.P. ______ to Sta/M.P. ______

Terrain: sea Soil Condition: ______

Fill Began: 8/19/02 at 18:24 hrs Fill Completed: 8/22/02 at 12:55 hrs

Meter Reading: Beginning 0 Gals., Final 2,871,625 Gal.

Displacement: Beginning ______ Gals., Meas. ______ Gal.

Gallons Required to increase presssure from ______ P.S.I.G. to ______ P.S.I.G. ______ Gal.

Exposed pipe 200 ft. General Contractor: Saibos

Time		Deadweight Pressure	TEMPERATURE OF			REMARKS
Date	Hour		Air	Water	Remote Earth	
8/25/02	17:22	7492	84	89		At test pressure
	17:52	7492	84	89		
	18:22	7492	84	88		
	18:52	7492	84	88		
	19:22	7492	82	88		
	19:52	7492	82	88		
	20:22	7490	82	88		
	20:52	7490	81	88		
	21:22	7488	81	88		
	21:52	7488	81	87		
	22:22	7488	81	87		
	22:52	7488	81	87		
	23:22	7488	81	87		
	23:52	7488	81	87		
8/26/02	0:22	7488	81	87		
	0:52	7488	81	87		
	1:22	7488	81	87		
	1:52					End of test as per Saibos Representative
						and TotalFinaElf Representative

Dead Weight #: 7002 Pressure Rec. #: 6012 Air Temp Rec #: 5036 Remote Earth Temp Rec #: ______ Pipe Temp Rec #: ______

Weatherford Superintendent: Vernon A. Fontenot Field Approval for Pipeline Company

Witness 1: P. Ceruti (Saibos) Insp.: H. G. Jones

2: ______ Chief Insp.: ______

Weatherford Pipeline & Specialty Services

308 Pinehurst St. • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

Hydrostatic Test Report

Company Saibos Construction

Line Canyon Express Location M.P. - 261 Job. No. P302-16 Length 5808[illegible] ft.

Line Size 11.15 O.D. 12.75 W.T. Gr. .800 Sta/M.P. ______ to Sta/M.P. ______

Terrain Sea Soil Condition ______

Fill Began 8/19/02 at 1824 A.M. P.M. Fill Completed 8/22/02 at 12:55 A.M. P.M.

Meter Reading: Beginning 0 Gals., Final 2,871,625 Gal.

Displacement: Beginning ______ Gals., Meas. ______ Gal.

Gallons Required to increase pressure from ______ P.S.I.G. to ______ P.S.I.G. ______ Gal.

Exposed pipe 200' ft. General Contractor Saibos Construction

TIME		Deadweight Pressure	TEMPERATURE OF			REMARKS
Date	Hour		Air	~~Pipe~~ water	Remote Earth	
8-25-02	17:22	7492	84	89		@Test press on Test
	17:52	7492	84	89		
	18:22	7492	84	88		
	18:52	7492	84	88		
	19:22	7492	82	88		
	19:52	7492	82	88		
	20:22	7490	82	88		
	20:52	7490	81	88		
	21:22	7488	81	88		
	21:52	7488	81	87		
	22:22	7488	81	87		
	22:52	7488	81	87		
	23:22	7488	81	87		
	23:52	7488	81	87		
8-26-02	00:22	7488	81	87		
	00:52	7488	81	87		
	01:22	7488	81	87		End of Test upon
	01:52					Sii Boss Rep & Total Fina
						Rep.

Dead Weight #: 7002 Pressure Rec. #: 6012 Air Temp Rec#: 5036 Remote Earth Temp Rec #: ______ Pipe Temp Rec#: ______

Weatherford Representative Vernon A. Fontenot Field Approval for Pipeline Company

Witness 1 SAIBOS P/CHAUTI Insp. H. G. Jones

2 ______ Chief Insp. ______

Weatherford Pipeline & Specialty Services

308 Pinehurst St. • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

Hydrostatic Test Report

Company Saibos Construction

Line CANYON EXPRESS Location M.P. - 261 Job. No. P302-16 Length 59080 ft.

Line Size 11.15 O.D. 12.75 W.T. Gr. .800 Sta/M.P. ______ to Sta/M.P. ______

Terrain SEA Soil Condition ______

Fill Began 8/19/02 at 1824 A.M./P.M. Fill Completed 8/22/02 at 12:55 A.M./P.M.

Meter Reading: Beginning 0 Gals., Final 2,871,625 Gal.

Displacement: Beginning ______ Gals., Meas. ______ Gal.

Gallons Required to increase pressure from ______ P.S.I.G. to ______ P.S.I.G. ______ Gal.

Exposed pipe 200' ft. General Contractor Saibos Construction

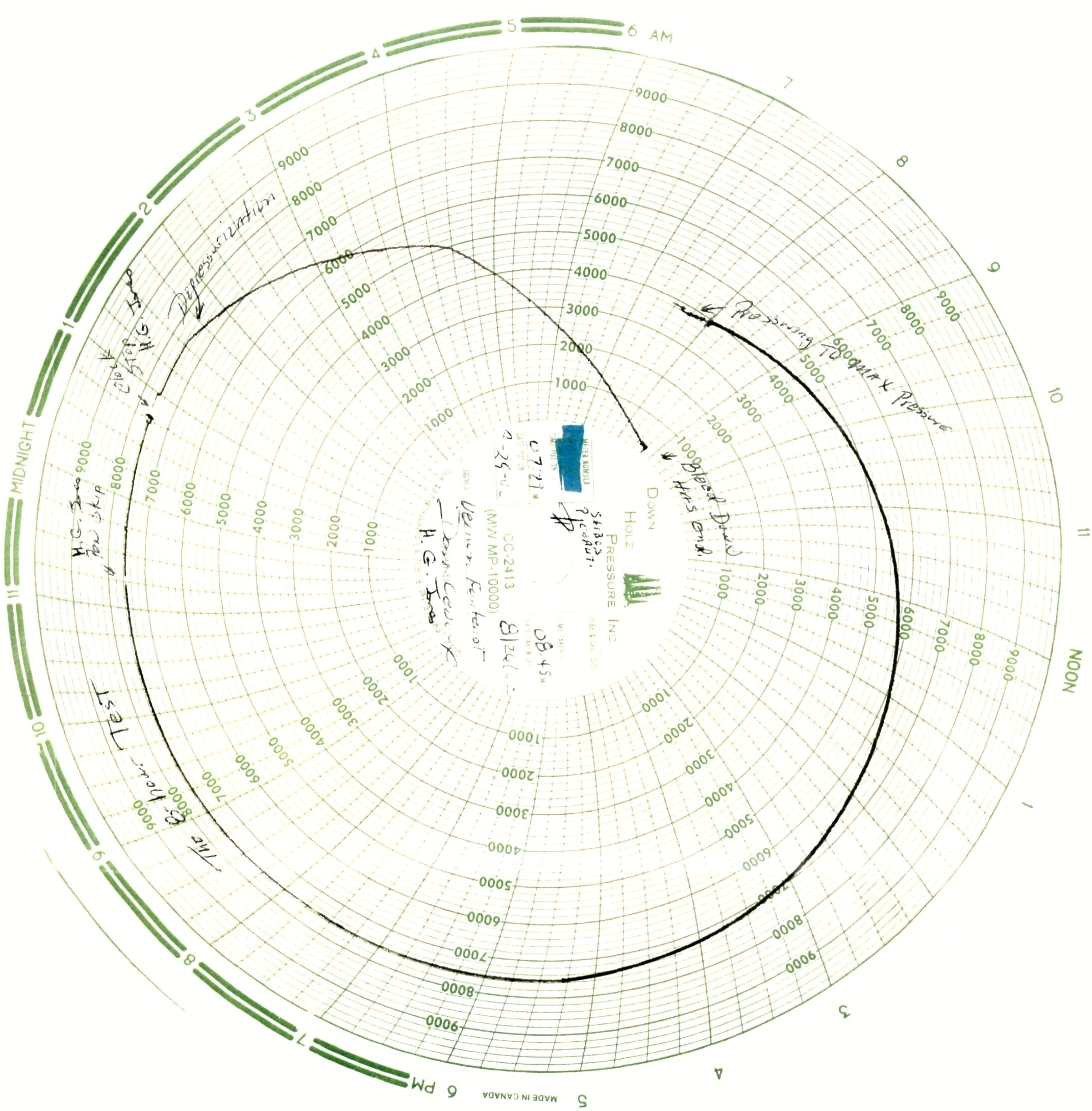
TIME		Deadweight Pressure	TEMPERATURE OF			REMARKS
Date	Hour		Air	~~Pipe~~ Water	Remote Earth	
8-25-02	17:22	7492	84	89		@ Test press on Test
	17:52	7492	84	89		
	18:22	7492	84	88		
	18:52	7492	84	88		
	19:22	7492	82	88		
	19:52	7492	82	88		
	20:22	7490	82	88		
	20:52	7490	81	88		
	21:22	7488	81	88		
	21:52	7488	81	87		
	22:22	7488	81	87		
	22:52	7488	81	87		
	23:22	7488	81	87		
	23:52	7488	81	87		
8-26-02	00:22	7488	81	87		
	00:52	7488	81	87		
	01:22	7488	81	87		End of Test upon
	01:52					Sai Boss Rep + Total Fina
						Rep.

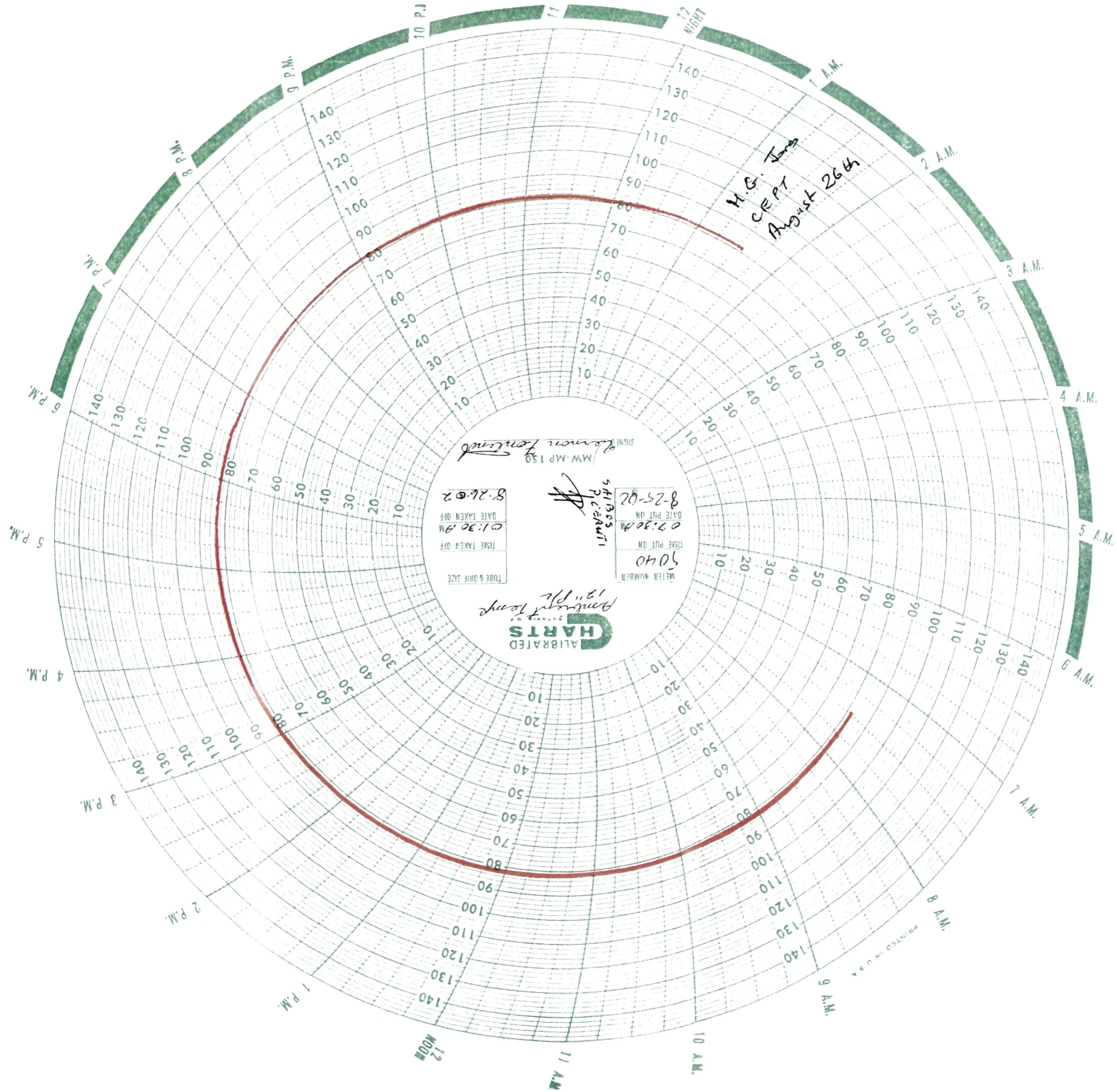
Dead Weight #: 7002 Pressure Rec. #: 6012 Air Temp Rec#: 5036 Remote Earth Temp Rec #: ______ Pipe Temp Rec#: ______

Weatherford Representative Vernon A. Fontenot Field Approval for Pipeline Company

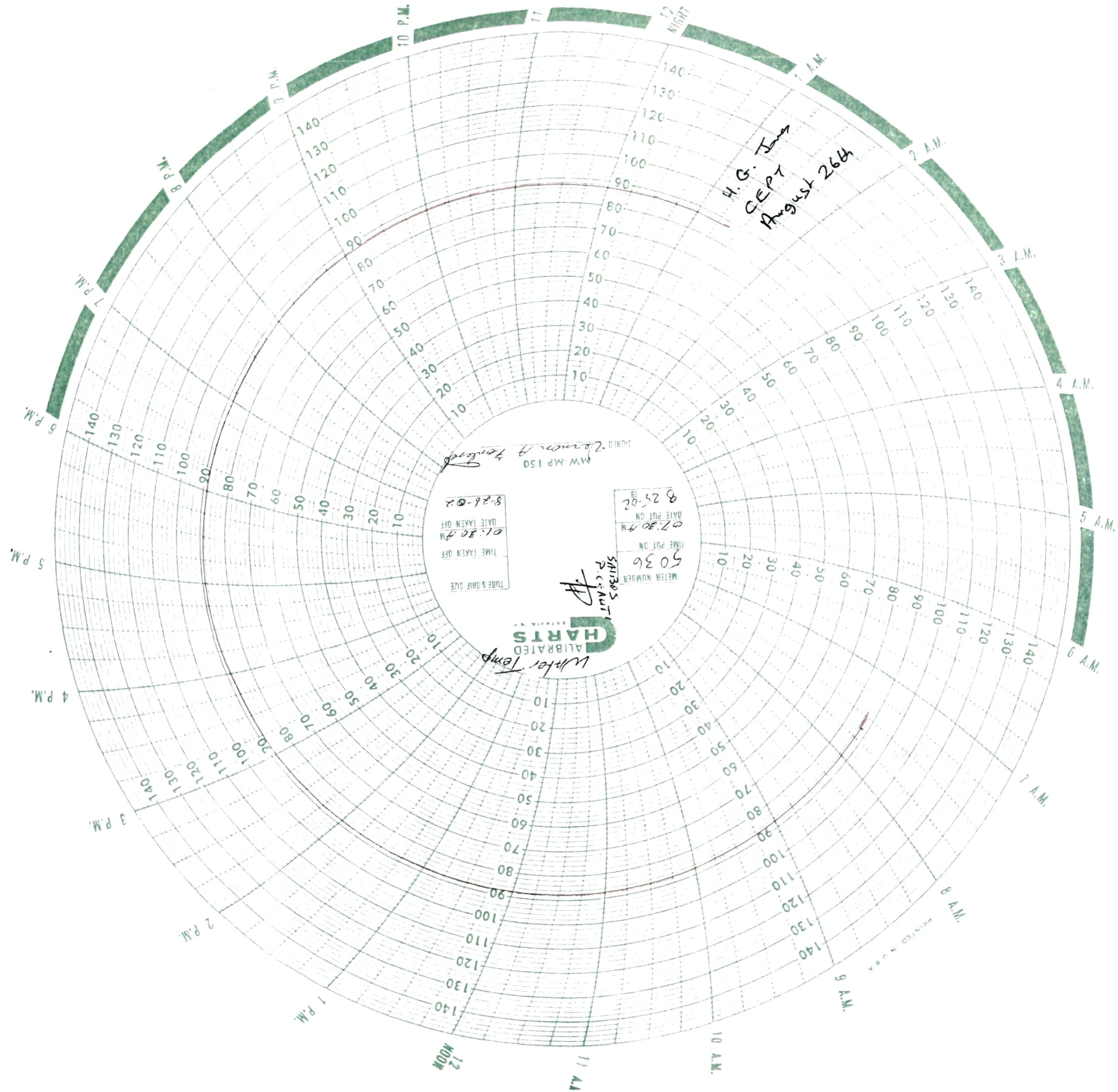
Witness 1 SAIBOS P. CHAUTI Insp. H. G. Jones

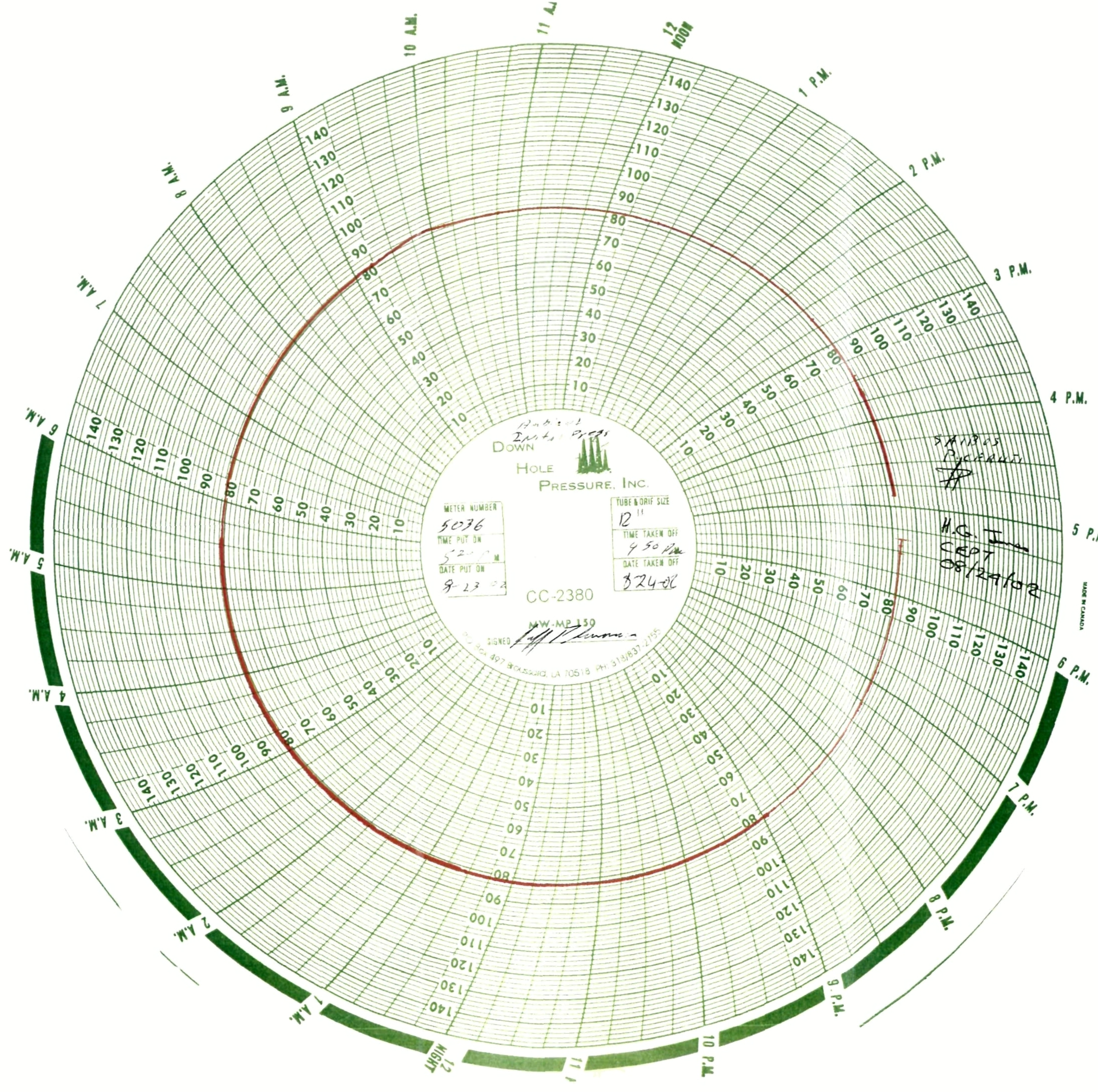
2 ______ Chief Insp. ______


Down
Hole
Pressure Inc
CC-2413
(MV MP-10000)
MIDNIGHT
NOON
6 AM
6 PM
MADE IN CANADA
Depressurization
Pressuring To Max Pressure
Bleed Down Has Ended
H.G. Ins Pen Skip
The 8-hour Test

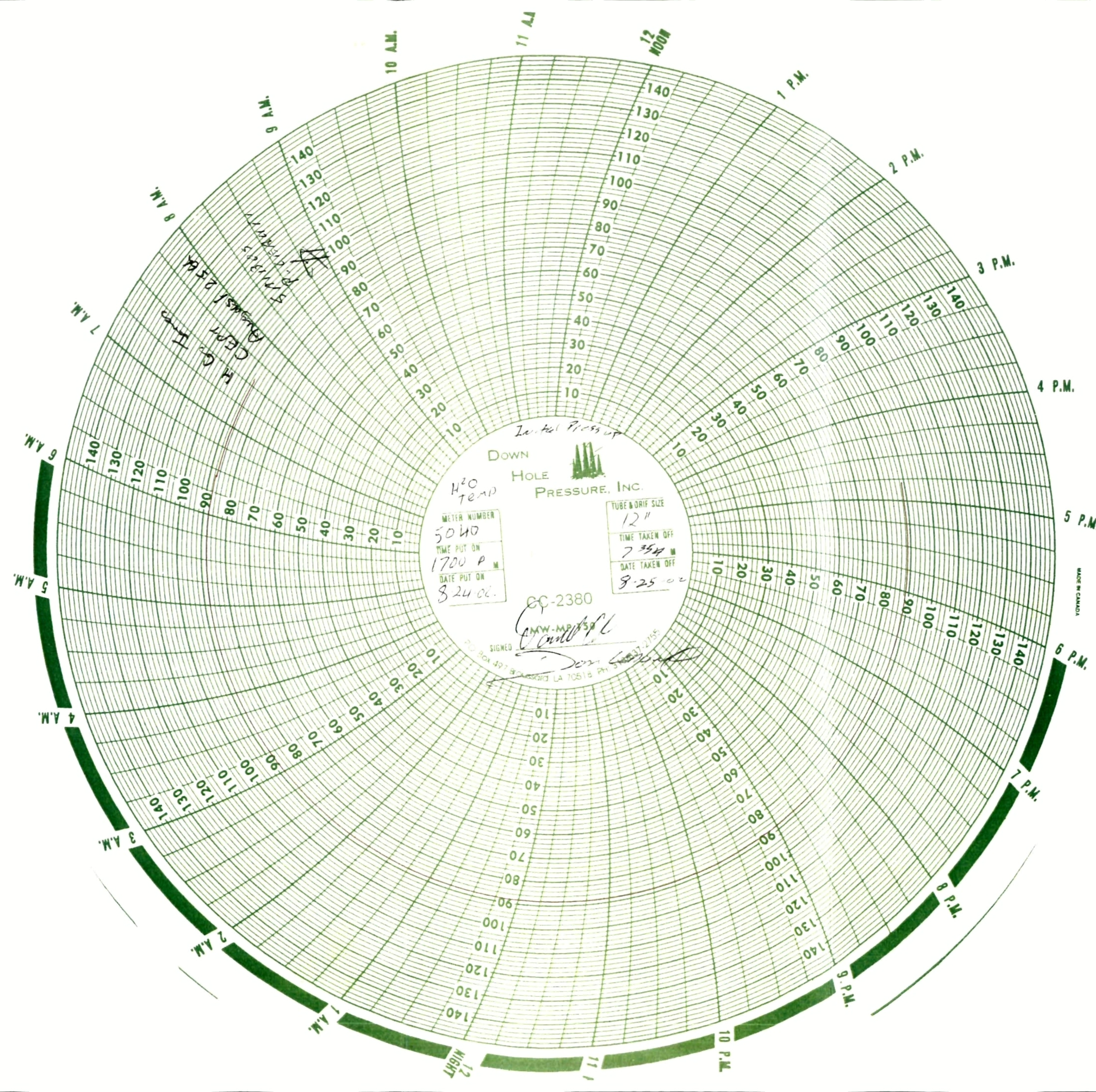


CALIBRATED CHARTS
MW-MP 130
SIGN
METER NUMBER
5040
TIME PUT ON
07:30 AM
DATE PUT ON
8-25-02
TIME TAKEN OFF
01:30 PM
DATE TAKEN OFF
8-26-02
TUBE & ORIF SIZE
CEPT
August 26th
PRINTED IN U.S.A.

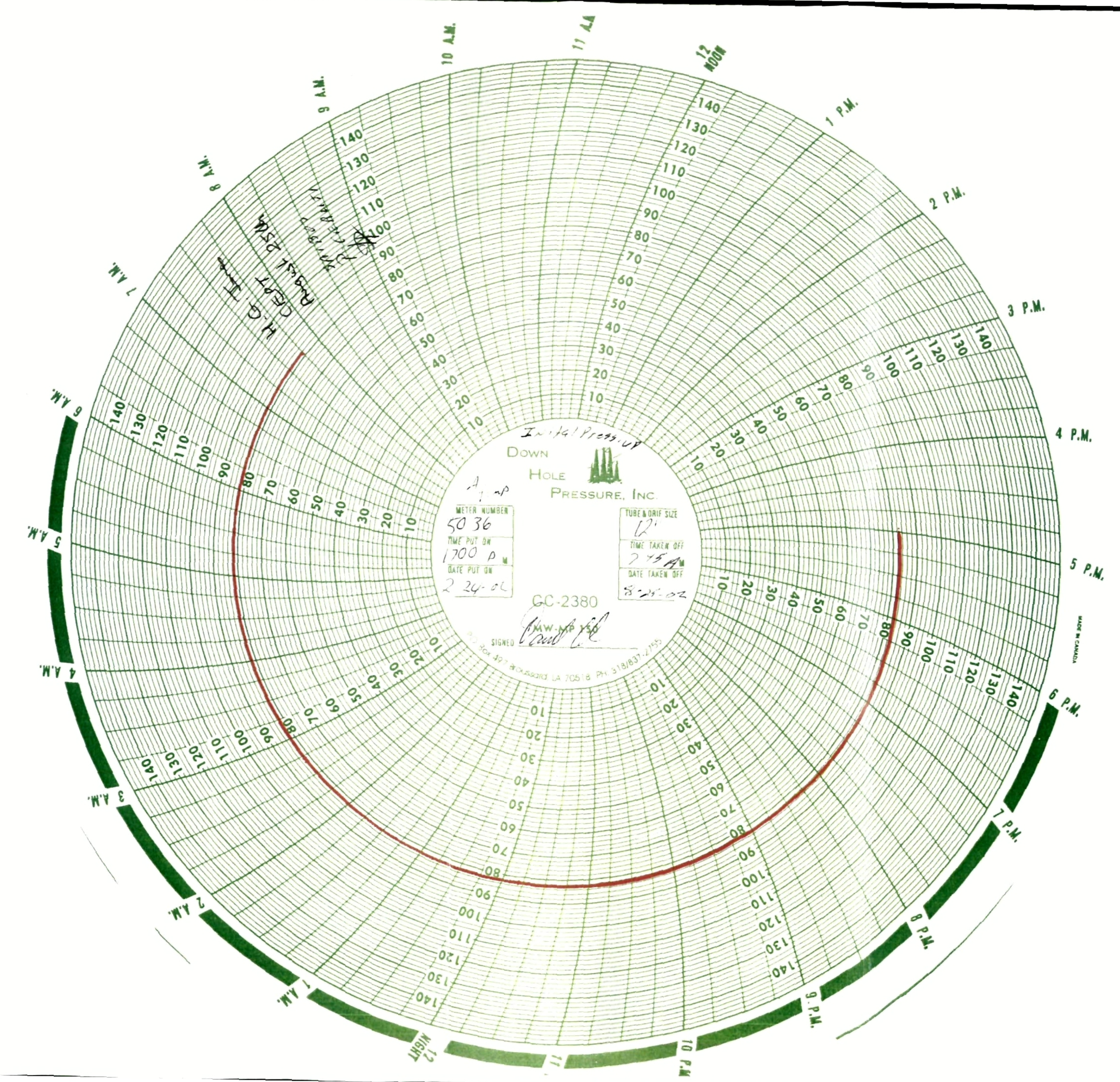

CEPT
August 26th
Water Temp
CALIBRATED CHARTS
MW MP 150
SIGNED
METER NUMBER
5036
TIME PUT ON
07:30 PM
DATE PUT ON
8-25-02
TIME TAKEN OFF
01:30 PM
DATE TAKEN OFF
8-26-02
TUBE & ORIF SIZE



DOWN
HOLE
PRESSURE, INC.
METER NUMBER
5036
TIME PUT ON
DATE PUT ON
8-23-02
TUBE & ORIF SIZE
12"
TIME TAKEN OFF
4 50 Pm
DATE TAKEN OFF
8-24-02
CC-2380
MW-MP 150
SIGNED
MADE IN CANADA
CEPT
08/24/02



Down Hole Pressure, Inc.
H2O Temp
Initial Press up
METER NUMBER
5040
TIME PUT ON
1700 P M
DATE PUT ON
8-24-02
TUBE & ORIF SIZE
12"
TIME TAKEN OFF
7 35 A M
DATE TAKEN OFF
8-25-02
CC-2380
SIGNED
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 AM
MADE IN CANADA


Initial Pressure
DOWN HOLE PRESSURE, INC.
METER NUMBER
50 36
TIME PUT ON
1700 P M
DATE PUT ON
2 24-02
TUBE & ORIF SIZE
12'
TIME TAKEN OFF
2 45 A M
DATE TAKEN OFF
GC-2380
SIGNED
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
MADE IN CANADA

Initial Pressurization and 2 Hour Pressure Test

Weatherford Pipeline & Specialty Services
308 Pinehurst St. • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

PRESSURE VOLUME TABLE

DATE 8/24/02 TEST NUMBER 1
TEST FOR Saibos Construction
SECTION CANYON EXPRESS LENGTH 580 800
DIAMETER 12.75 WALL THICKNESS .800

LINE PACKED TO ________ PSIG TIME .800
START P.D. ________ STOP P.D. ________ GAL. TO LEVEL OUT ________ AT ________ PSIG
START FINAL SQUEEZE ________ ON TEST ________ WITH ________ PSIG
GALLONS TO TEST ________ REMARKS ________

PRESSURE	STROKES	DIFFERENTIAL	PRESSURE	STROKES	DIFFERENTIAL
PRESSURIZING	TO	~ 80% OF	TEST PRESSURE		
08/23/02	TIME 20.25		- 0 -		
08/24/02	" 17.07		5800 psi.	~ 80% T. PR.	
				P/V PLOT START	

OFF TEST ________ PRESSURE ________ SAIBOS P. CANUTI

REPORT PREPARED BY Don Lewis

INSPECTOR H.G. Ives

Weatherford Pipeline & Specialty Services

308 Pinehurst St. • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

PRESSURE VOLUME TABLE

DATE 8/24/02 TEST NUMBER 1

TEST FOR - Saibos Construction

SECTION Canyon Express LENGTH 580800

DIAMETER 12.75 WALL THICKNESS .800

LINE PACKED TO ______ PSIG TIME ______

START P.D. ______ STOP P.D. ______ GAL. TO LEVEL OUT ______ AT ______ PSIG

START FINAL SQUEEZE ______ ON TEST ______ WITH ______ PSIG

GALLONS TO TEST ______ REMARKS ______

PRESSURE 8/24/02	~~STROKES~~ GLS	DIFFERENTIAL GLS	PRESSURE	~~STROKES~~ GLS	DIFFERENTIAL GLS
17:09 5900	101	101	30	2398	101
10	201	100	40	3412	101
20	302	101	50	3512	100
30	402	100	60	3611	99
40	501	99	70	3711	100
50	601	100	80	3809	98
60	702	101	90	3911	102
70	800	98	6200	4011	100
80	902	102	10	4110	99
90	1001	99	20	4210	100
6000	1100	99	30	4311	101
10	1200	100	40	4413	102
20	1300	100	50	4515	102
30	1399	99	60	4616	101
40	1499	100	70	4715	99
50	1598	99	80	4814	99
60	1697	99	90	4914	100
70	1797	100	6300	5013	99
80	1867	100	10	5113	100
90	1997	100	20	5211	98
6100	2096	99	30	5313	102
10	2196	100	40	5414	101
20	2297	101	50	5514	100

OFF TEST ______ PRESSURE ______

SAIBOS P. CERUTI

REPORT PREPARED BY Don LeDoux

INSPECTOR H. G. Jones

Weatherford Pipeline & Specialty Services

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PRESSURE VOLUME TABLE

DATE ____________ TEST NUMBER 1

TEST FOR Saibos Construction

SECTION Canyon Express LENGTH 580800

DIAMETER 12.75 WALL THICKNESS .800

LINE PACKED TO ____________ PSIG TIME ____________

START P.D. ____________ STOP P.D. ____________ GAL. TO LEVEL OUT ________ AT ________ PSIG

START FINAL SQUEEZE ____________ ON TEST ____________ WITH ____________ PSIG

GALLONS TO TEST ____________ REMARKS ____________

PRESSURE PSI	~~STROKES~~ GLS	DIFFERENTIAL GLS	PRESSURE PSI	~~STROKES~~ GLS	DIFFERENTIAL GLS
6300	5614	100	90	7914	100
70	5715	101	6600	8013	99
80	5814	99	10	8113	100
90	5915	101	20	8215	102
6400	6014	99	30	8317	102
10	6115	101	40	8415	98
20	6215	100	50	8515	100
30	6315	100	60	8615	100
40	6416	101	70	8715	100
50	6515	99	80	8815	100
60	6615	100	90	8916	101
70	6715	100	6700	9016	100
80	6816	101	10	9116	100
90	6916	100	20	9216	100
6500	7016	100	30	9317	101
10	7115	99	40	9416	99
20	7214	99	50	9517	101
30	7314	100	60	9616	99
40	7414	100	70	9717	101
50	7514	100	80	9815	98
60	7615	101	90	9917	102
70	7715	100	6800	10017	100
80	7814	99	10	10117	100

OFF TEST ____________ PRESSURE ____________

SAIBOS
P. CERUTI
PP.

REPORT PREPARED BY ____________

INSPECTOR K. G. [illegible]

Weatherford Pipeline & Specialty Services

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PRESSURE VOLUME TABLE

DATE 8/24/02 TEST NUMBER 1

TEST FOR Saibos Construction

SECTION CANYON Express LENGTH 580800

DIAMETER 12.75 WALL THICKNESS .800

LINE PACKED TO ______ PSIG TIME ______

START P.D. ______ STOP P.D. ______ GAL. TO LEVEL OUT ______ AT ______ PSIG

START FINAL SQUEEZE ______ ON TEST ______ WITH ______ PSIG

GALLONS TO TEST ______ REMARKS ______

PRESSURE PSI	STROKES GLS	DIFFERENTIAL GLS	PRESSURE PSI	STROKES GLS	DIFFERENTIAL GLS
6820	10216	99	50	12520	101
30	10315	99	60	12621	101
40	10416	101	70	12722	101
50	10516	100	80	12822	100
60	10617	101	90	12922	100
70	10718	101	7100	13022	100
80	10818	100	10	13121	99
90	10917	99	20	13223	102
6900	11017	100	30	13325	102
10	11117	100	40	13426	101
20	11218	101	50	13526	100
30	11316	98	60	13627	101
40	11417	101	70	13728	101
50	11516	99	80	13828	100
60	11618	102	90	13928	100
70	11718	100	7200	14028	100
80	11818	100	10	14129	101
90	11919	101	20	14230	101
7000	12019	100	30	14330	100
10	12119	100	40	14431	101
20	12218	99	50	14533	102
30	12319	101	60	14634	101
40	12419	100	70	14736	102

OFF TEST ______ PRESSURE ______

SAIBOS P.CRAUFI

REPORT PREPARED BY ______

INSPECTOR H.G. [illegible]

Weatherford Pipeline & Specialty Services
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PRESSURE VOLUME TABLE

DATE 8/24/02 TEST NUMBER

TEST FOR Saibos Construction

SECTION Canyon Express LENGTH 580800

DIAMETER 12.75 WALL THICKNESS .800

LINE PACKED TO PSIG TIME

START P.D. STOP P.D. GAL. TO LEVEL OUT AT PSIG

START FINAL SQUEEZE ON TEST WITH PSIG

GALLONS TO TEST REMARKS

PRESSURE PSI	~~STROKES~~ GLS	DIFFERENTIAL GLS	PRESSURE	STROKES	DIFFERENTIAL
80	14838	102			
90	14939	101			
7300	15041	102			
10	15141	100			
20	15242	101			
30	15344	102			
40	15446	102			
50	15547	101			
60	15648	101			
70	15750	102			
80	15850	100			
90	15952	102			
7400	16053	101			
10	16155	102			
20	16257	102			
7430	16359	102	2 HOURS PRESS. HOLD	TIME	22.40

OFF TEST PRESSURE

SAIBOS
P. CERUTI
P.

REPORT PREPARED BY

INSPECTOR H.C. [illegible]

PAGE 5 OF 5

Weatherford Pipeline & Specialty Services
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Line ________ Location ________ Job. No. ________ Length ____ ft.

Line Size ________ O.D. ________ W.T. Gr. ________ Sta/M.P. ________ to Sta/M.P. ________

TIME		Deadweight Pressure psi	TEMPERATURE OF			REMARKS
Date	Hour		Air	Pipe	Remote Earth	
8/24/02	22.40	7430				2 HOURS PR. HOLD
	23.10	7430				
	23.40	7430				
08/25/02	00.10	7430				
	00.40	7430				2 HOURS END
	START BLEEDING TO 3714 PSI					

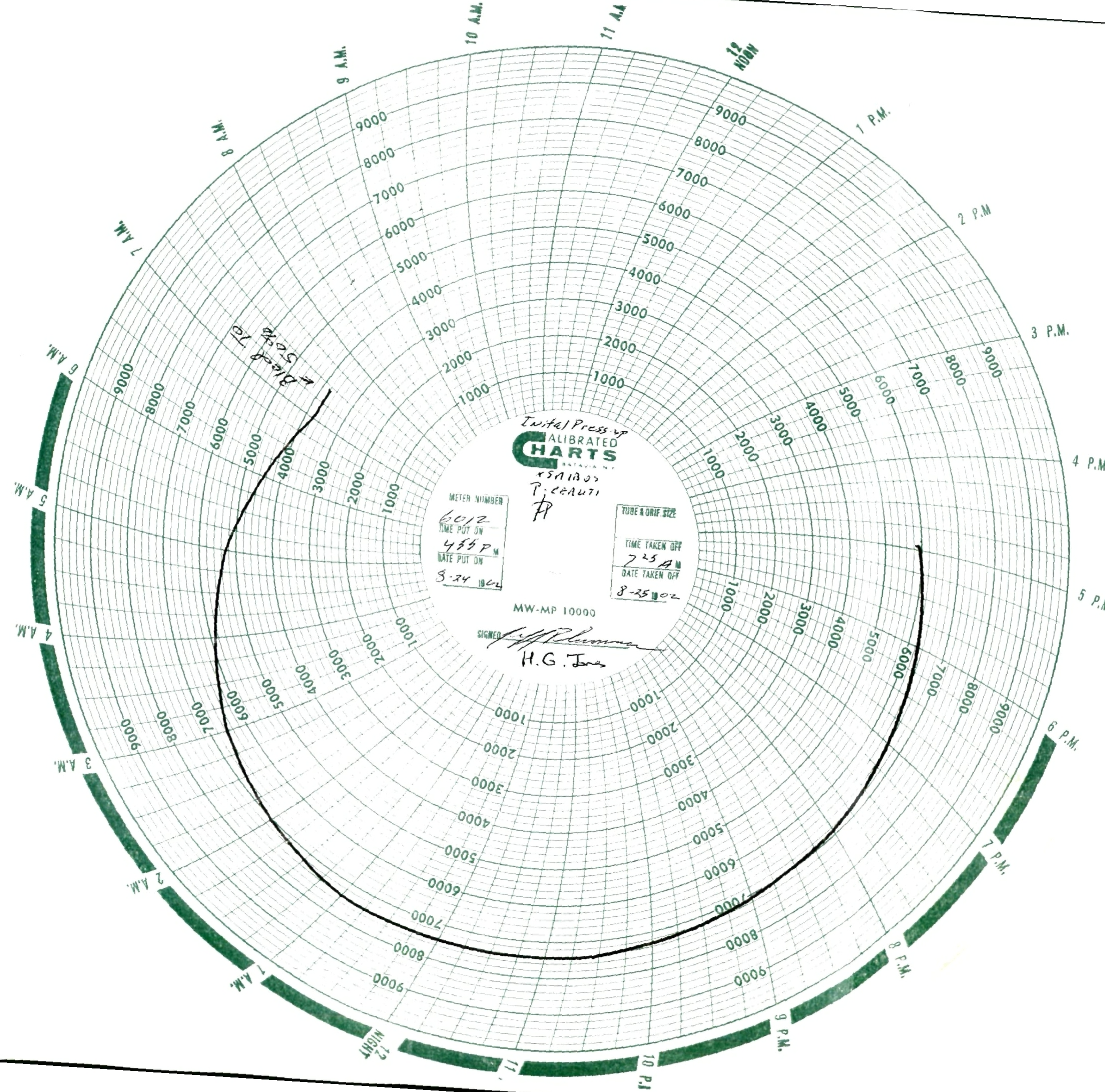
Dead Weight #: ________ Pressure Rec. #: ________ Air Temp Rec#: ________ Remote Earth Temp Rec #: ________ Pipe Temp Rec#: ________

Don Ledoux
Weatherford Representative

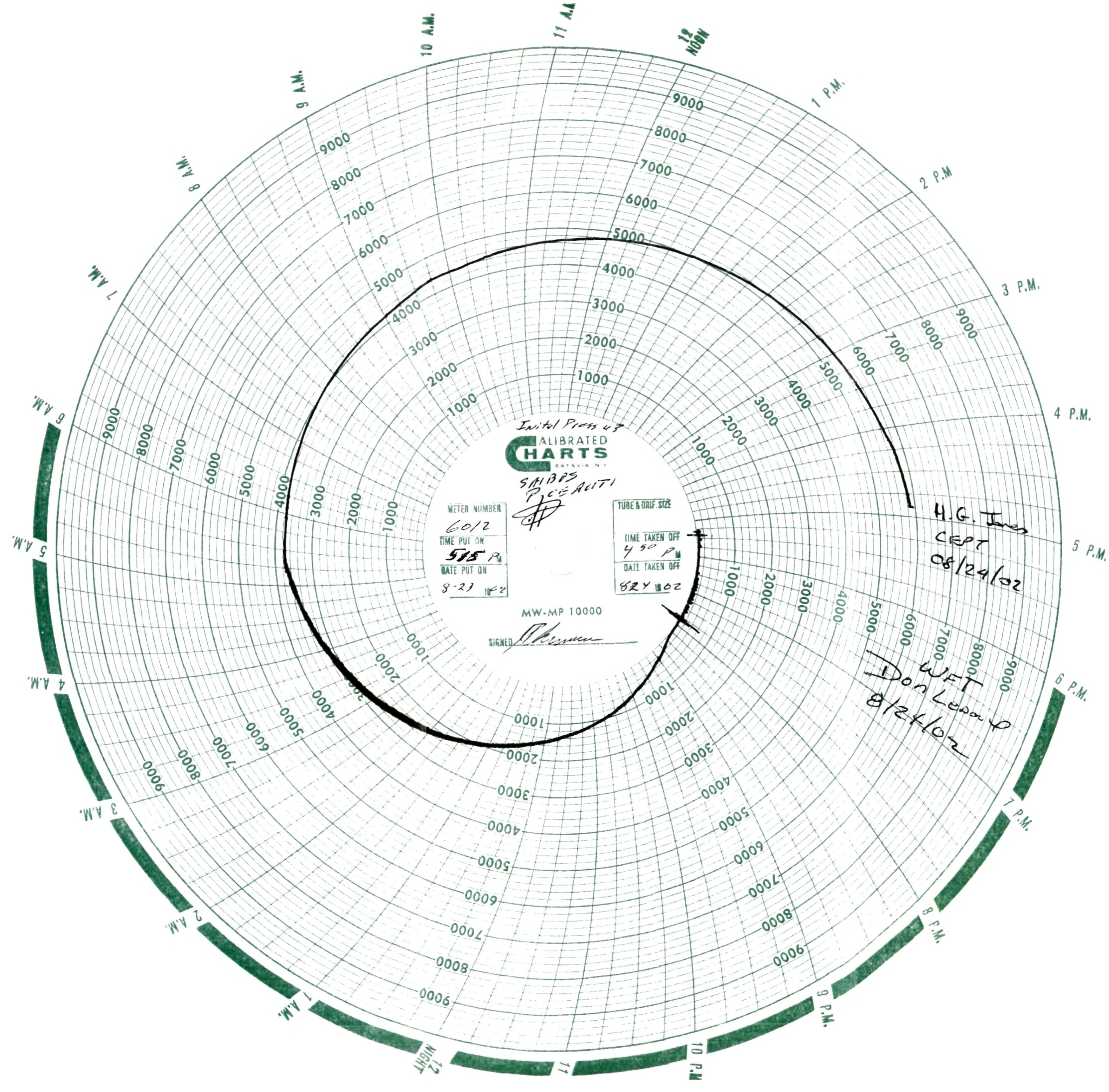
K.G. Jones
Inspector

5/11/13 CS
P. CARUTH

PAGE ______ OF ______



Inital Press-up
CALIBRATED CHARTS
METER NUMBER 6012
TIME PUT ON 4:55 P M
DATE PUT ON 8-24 1962
TUBE & ORIF SIZE
TIME TAKEN OFF 7:25 A M
DATE TAKEN OFF 8-25 1962
MW-MP 10000
SIGNED
H.G. Jones
Bleed To 5000


CALIBRATED CHARTS
METER NUMBER
6012
TIME PUT ON
515 P
DATE PUT ON
8-23
TUBE & ORIF. SIZE
TIME TAKEN OFF
450 P
DATE TAKEN OFF
824 02
MW-MP 10000
SIGNED
H.G. Jones
CEPT
08/24/02
WFT
Don Leonard
8/24/02
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
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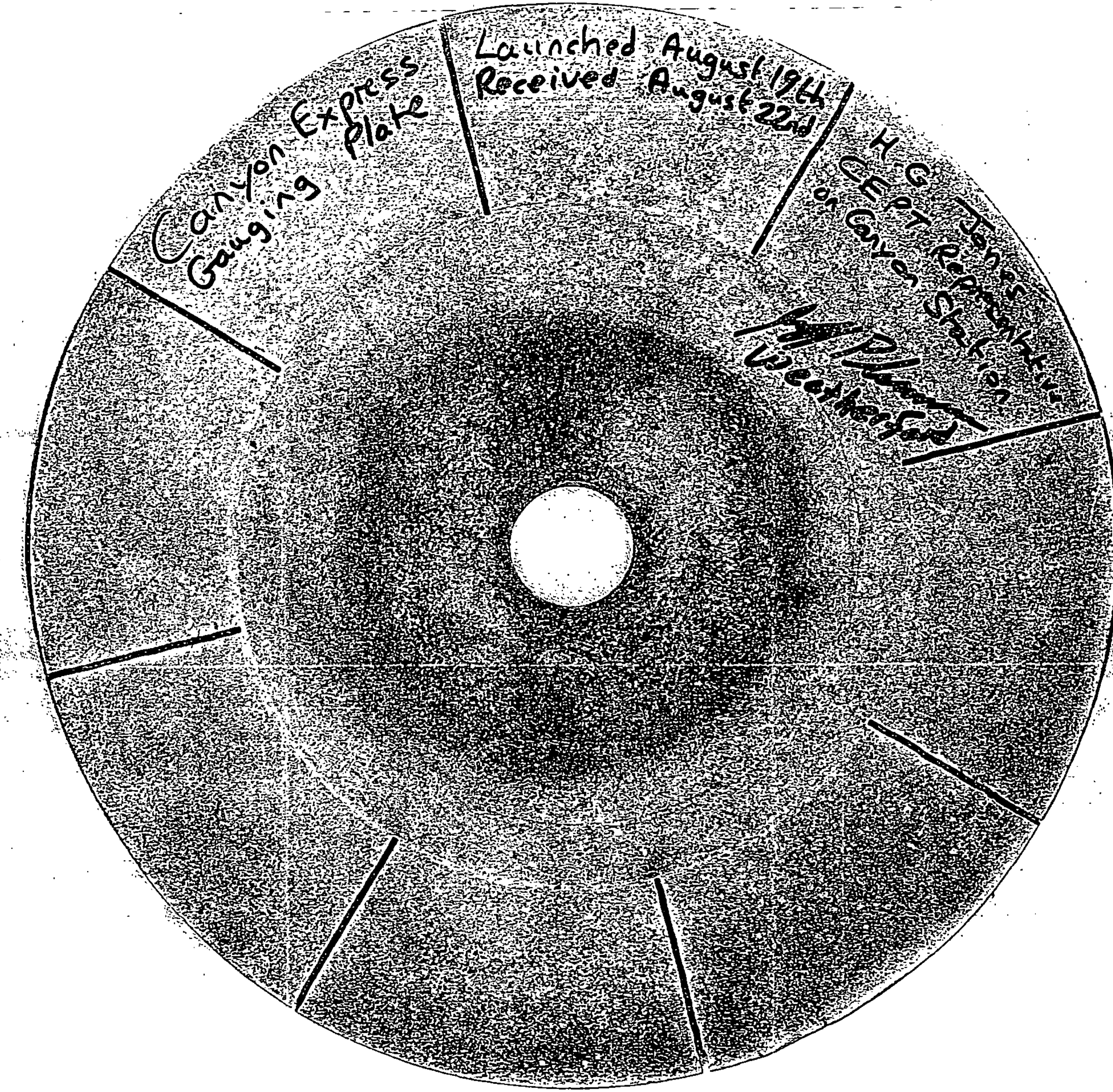
11 A.M.


Canyon Express
Gauging plate
Launched August 19th
Received August 22nd
H.G. Jones
CEPT Representative
on Canyon Station
Weatherford

Weatherford Pipeline & Specialty Services

308 Pinehurst Street • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

FILL LOG

DATE 8-22-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/11FP88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP					
TIME	READING	GPM	FILTER	~~PIPE~~ Pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	East	REMARKS	West
00:30	2363788	740	60	590	130	55	1350	180	58	1700	540		35
01:00	2386151	740	60	590	130	55	1350	180	58	1700	540		35
01:30	2407408	740	60	590	130	55	1350	180	58	1700	540		35
02:00	2429026	740	60	590	130	55	1350	180	58	1700	540		35
02:30	2450371	740	60	590	130	55	1350	180	58	1700	540		35
03:00	2473125	740	60	590	130	55	1350	180	58	1700	540		35
03:30	2494551	740	60	590	130	55	1350	180	58	1700	540		35
04:00	2516704	740	60	590	130	55	1350	180	58	1700	540		35
04:30	2538988	740	60	590	130	55	1350	180	58	1700	540		35
05:00	2559722	740	60	590	130	55	1350	180	58	1700	540		35
05:30	2680563	740	60	590	130	55	1350	180	58	1700	540		35
0600	2,603,647	740	60	590	130	55	1350	180	58	1700	540		35
0630	2,625,818	748	60	590	130	55	1350	180	58	1700	540		35
0700	2,645,971	740	60	590	130	55	1350	180	58	1700	540		35
0730	2,668,419	748	60	590	130	55	1350	180	58	1700	540		35
800	2,692,551	748	60	590	130	55	1350	180	58	1700	540		35
830	2,712,837	740	60	590	130	55	1350	180	58	1700	540		35
855	2,729,717	Williams Shuts Pigging Operations For Leaking Pig Trap Door.											---
912	—	—	—	—	—	Resume Pumping							—
930	2,742,611	748	60	590	130	55	1350	180	58	1700	540		35
10:00	2,763,642	748	60	590	130	55	1350	180	58	1700	540		35
10:30	2,785,511	748	60	590	130	55	1350	180	58	1700	540		35
11:00	2,807,127	748	60	590	130	55	1350	180	58	1700	540		35
11:30	2,831,975	748	60	590	130	55	1350	180	58	1700	540		35
11:47	2,845,303	At 11:38 And 11:48 Received #1 & #2 Pig											—
1215	—	AT 12:25 Received #3-Pig											—
1230	2,855,868	740	60	590	130	55	1350	180	58	1700	540		35
1255	2,871,625	12:55 Received #4-Pig											35
1300	2,876,670	Completed Flushing/ Flushed - 5,046.											

Vernon A. Fontenot
Weatherford Representative

+ 5A1 B 2 S
P. Ceravti H.G. Jones
Inspector

Weatherford Pipeline & Specialty Services

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FILL LOG

DATE 8-21-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/HFP 88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
TIME	READING	GPM	FILTER	~~PIPE~~ pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	EAST	WEST
10:00	1738772	740	60	590	130	55	1350	180	58	1700	540	40
10:30	1758849	740	60	590	130	55	1350	180	58	1700	540	40
11:00	1780019	740	60	590	130	55	1350	180	58	1700	540	40
11:30	1801906	740	60	590	130	55	1350	180	58	1700	540	40
12:00	1826044	740	60	590	130	55	1350	180	58	1700	540	40
12:30	1845822	740	60	590	130	55	1350	180	58	1700	540	40
13:00	1866512	740	60	590	130	55	1350	180	58	1700	540	40
13:30	1890270	740	60	590	130	55	1350	180	58	1700	540	40
14:00	1908451	740	60	590	130	55	1350	180	58	1700	540	40
14:30	1935699	740	60	590	130	55	1350	180	58	1700	540	40
15:00	1952074	740	60	590	130	55	1350	180	58	1700	540	40
15:30	1973207	740	60	590	130	55	1350	180	58	1700	540	40
16:00	2000000	740	60	590	130	55	1350	180	58	1700	540	40
16:30	2019628	740	60	590	130	55	1350	180	58	1700	540	40
17:00	2038924	740	60	590	130	55	1350	180	58	1700	540	40
17:30	2075182	730	60	550	130	55	1350	180	58	1700	540	40
18:00	2079564	740	60	590	130	55	1350	180	58	1700	520	40
18:30	2103466	740	60	590	130	55	1350	180	58	1700	540	40
19:00	2129820	740	60	590	130	55	1300	180	58	1700	540	35
19:30	2146974	740	60	590	130	55	1300	180	58	1700	540	35
20:00	2168750	740	60	590	130	55	1300	180	58	1700	540	40
20:30	2190895	740	60	590	130	55	1300	180	58	1700	540	40
21:00	2212972	740	60	590	130	55	1300	180	58	1700	540	40
21:30	2233591	740	60	590	130	55	1300	180	58	1700	540	40
22:00	2254800	740	60	590	130	55	1300	180	58	1700	540	40
22:30	2283888	740	60	590	130	55	1300	180	58	1700	540	40
23:00	2301429	740	60	590	130	55	1300	180	58	1700	540	35
23:30	2322581	740	60	590	130	55	1300	180	58	1700	540	35
24:00	2341808	740	60	590	130	55	1300	180	58	1700	540	35

Vernon A. Fontenot
Weatherford Representative

XSAIBOS
P. LEAUTI H.G. Inc.
Inspector

Weatherford Pipeline & Specialty Services

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FILL LOG

DATE 8-20-02/8-21-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/HFP88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
TIME	READING	GPM	FILTER	~~PIPE~~ pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	EAST	WEST
20:30	1156608	740	60	590	130	55	1350	180	58	1700	540	40
21:00	1178171	740	60	590	130	55	1350	180	58	1700	540	40
21:30	1199324	740	60	590	130	55	1350	180	58	1700	540	40
22:00	1222364	740	60	590	130	55	1350	180	58	1700	540	35
22:30	1243310	740	60	590	130	55	1350	180	58	1700	540	35
23:00	1263600	740	60	590	130	55	1350	180	58	1700	540	35
23:30	1287292	740	60	590	130	55	1350	180	58	1700	540	40
23:50	1302092										Pressure spike	
24:00	1307047	740	60	590	120	55	1350	180	58	1700	540	35
8-21-02												
00:30	1329975	740	60	590	120	55	1350	180	58	1700	540	35
01:00	1350398	740	60	590	130	55	1350	180	58	1700	540	35
01:30	1372444	740	60	590	130	55	1350	180	58	1700	540	35
02:00	1393632	740	60	590	130	55	1350	180	58	1700	540	35
02:30	1416645	740	60	590	130	55	1350	180	58	1700	540	35
03:00	1437351	740	60	590	130	55	1350	180	58	1700	540	35
03:30	1460110	740	60	590	130	55	1350	180	58	1700	540	35
04:00	1480067	740	60	590	130	55	1350	180	58	1700	540	35
04:30	1502922	740	60	590	130	55	1350	180	58	1700	540	35
05:00	1521895	740	60	590	130	55	1350	180	58	1700	540	40
05:30	1543495	740	60	540	130	55	1350	180	58	1700	540	40
06:00	1562238	740	60	590	130	55	1350	180	58	1700	540	40
06:30	1584438	740	60	590	130	55	1350	180	58	1700	540	40
07:00	1605042	740	60	590	130	55	1350	180	58	1700	540	40
07:30	1632259	740	60	590	130	55	1350	180	58	1700	540	40
08:00	1652973	740	60	590	130	55	1350	180	58	1700	540	40
08:30	1674727	740	60	590	130	55	1350	180	58	1700	540	40
09:00	1695623	740	60	590	130	55	1350	180	58	1700	540	40
09:30	1720367	740	60	590	130	55	1350	180	58	1700	540	40

Vernon A. Fontenot
Weatherford Representative

x 5A1131S
P. CERAUTI H.G. Jones
Inspector

Weatherford Pipeline & Specialty Services

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FILL LOG

DATE 8-20-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/HPP99

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP				
TIME	READING	GPM	FILTER	~~PIPE~~ PUMP	TEMP.	OIL	RPM	TEMP.	OIL	RPM	EAST REMARKS	WEST
06:00	530780	748	60	590	140	55	1300	180	58	1700	540	40
06:30	552725	748	60	540	140	55	1300	180	58	1700	540	40
07:00	574312	748	60	590	140	55	1300	180	58	1700	540	40
07:30	598312	748	60	590	140	55	1300	180	58	1700	540	40
08:00	618319	757	60	590	140	55	1300	180	58	1700	540	40
08:30	640000	757	60	590	140	55	1700	180	58	1700	540	40
09:00	660760	757	60	590	140	55	1300	180	58	1700	540	40
09:30	683721	740	60	590	140	55	1300	180	58	1700	540	40
10:00	706970	731	60	590	140	55	1300	180	58	1700	540	40
10:30	727150	748	60	590	140	55	1300	180	58	1700	540	40
11:00	747984	748	60	590	140	55	1300	180	58	1700	540	40
11:30	768380	731	60	590	140	55	1300	180	58	1700	540	40
12:00	791205	740	60	590	140	55	1300	180	58	1700	540	40
12:30	811978	740	60	590	140	55	1300	180	58	1700	540	40
13:00	834747	731	60	590	140	55	1300	180	58	1700	540	40
13:30	856154	731	60	590	140	55	1300	180	58	1700	540	40
14:00	878554	748	60	590	140	55	1300	180	58	1700	540	40
14:30	901200	740	60	590	140	55	1300	180	58	1700	540	40
15:00	916542	757	60	590	140	55	1300	180	58	1700	540	40
15:30	939440	748	60	590	140	55	1300	180	58	1700	540	40
16:00	964638	731	60	590	140	55	1300	180	58	1700	540	40
16:30	980419	738	60	590	140	55	1300	180	58	1700	540	40
17:00	1008306	740	60	590	140	55	1300	180	58	1700	540	40
17:30	1028694	740	60	590	140	55	1300	180	58	1700	540	40
18:00	1049020	740	60	590	140	55	1300	180	58	1700	540	40
18:30	1069927	740	60	590	140	55	1300	180	58	1700	540	40
19:00	1091207	740	60	590	140	55	1300	180	58	1700	540	40
19:30	1113264	740	60	590	140	55	1300	180	58	1700	540	40
20:00	1136725	740	60	590	140	55	1300	180	58	1700	540	40

Vernon A. Fontenot
Weatherford Representative

x SAIDAS
T. CERUTI H.C. I
Inspector

Weatherford Pipeline & Specialty Services

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FILL LOG

DATE 8-19-02

JOB PS-0216 LOCATION MP 261 UNITS FP12/HPP 88

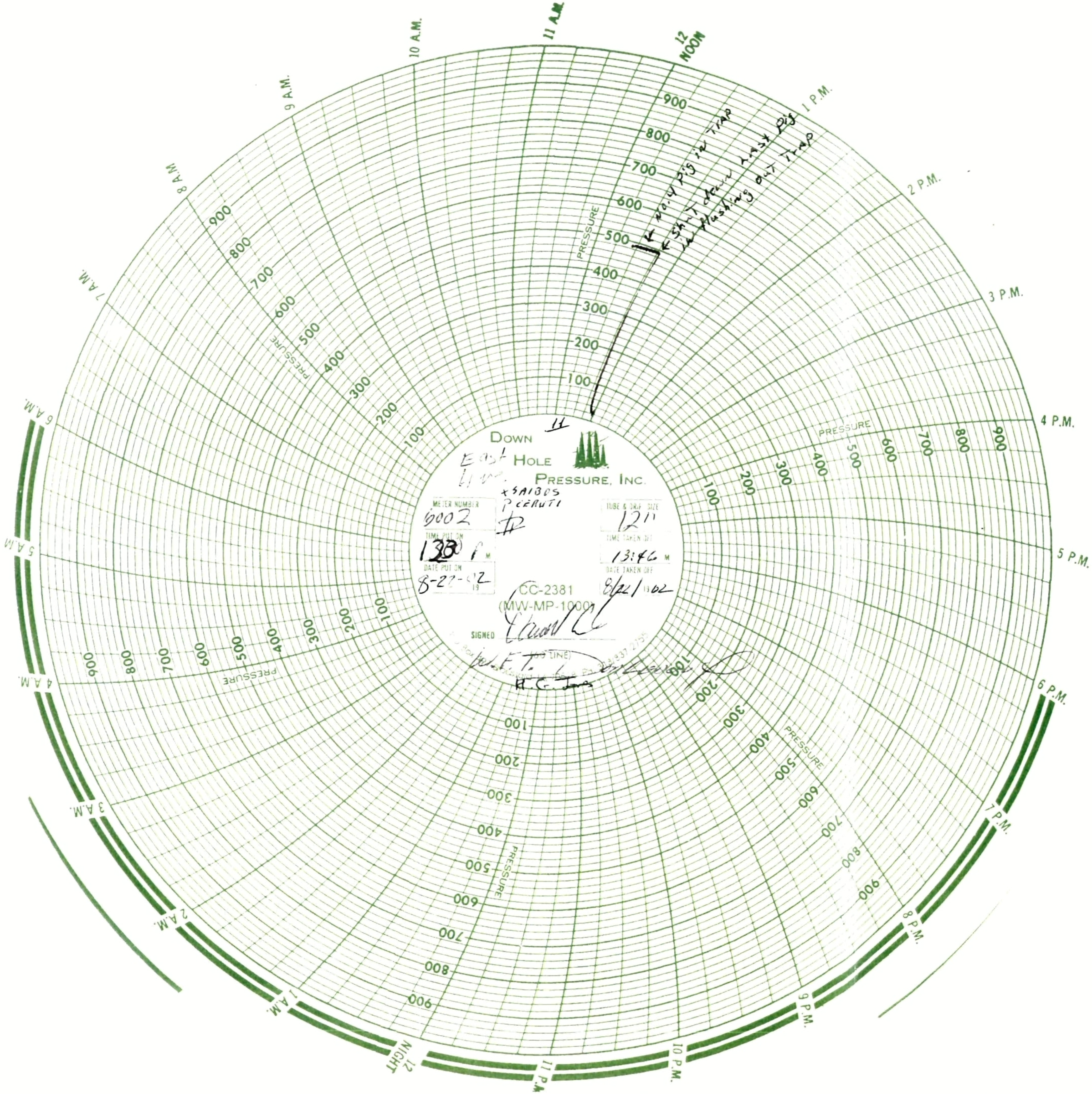
	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			
TIME	READING	GPM	FILTER	~~PIPE~~ pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	EAST REMARKS WEST
15:40	16000										Launched 1st pig
16:30	32000										Launched 2nd pig
17:15	48000										Launched 3rd pig
18:30	68000										Launched 4th pig
19:00	76448	801	60	700	140	55	1400	180	60	1800	660 45
19:30	102842	810	60	700	140	55	1400	180	60	1800	650 45
20:00	123740	810	60	700	140	55	1400	180	60	1800	650 45
20:30	147893	810	60	700	140	55	1400	180	60	1800	650 45
21:00	170844										
21:10	178944										press increase
21:25											press decreased to 645 psi
21:30	195831	810	60	700	140	55	1400	180	60	1800	650 45
22:00	212877	810	60	700	140	55	1400	185	60	1800	640 45
22:30	243587	810	60	700	140	55	1400	180	60	1800	640 45
23:00	267180	810	60	700	140	55	1400	180	60	1800	640 45
23:05	Shut down pumping due to busted Hose										
24:00	Started Running pig Train										
8-20-02											
00:30	292716	748	60	590	140	55	1300	180	58	1700	550 40
01:00	314133	748	60	590	140	55	1300	180	58	1700	550 35
01:30	335059	748	60	590	140	55	1300	180	58	1700	555 45
02:00	357520	748	60	590	140	55	1300	180	58	1700	555 40
02:30	380567	748	60	590	140	55	1300	180	58	1700	555 40
03:00	400563	748	60	590	140	55	1300	180	58	1700	555 40
03:30	422631	748	60	590	140	55	1300	180	58	1700	555 40
04:00	444714	748	60	590	140	55	1300	180	58	1700	555 40
04:30	466295	748	60	590	140	55	1300	180	58	1700	555 40
05:00	487930	748	60	590	140	55	1300	180	58	1700	540 40
05:30	508951	748	60	590	140	55	1300	180	58	1700	540 40

Vernon A. Fontenot WFT Don Leoseur

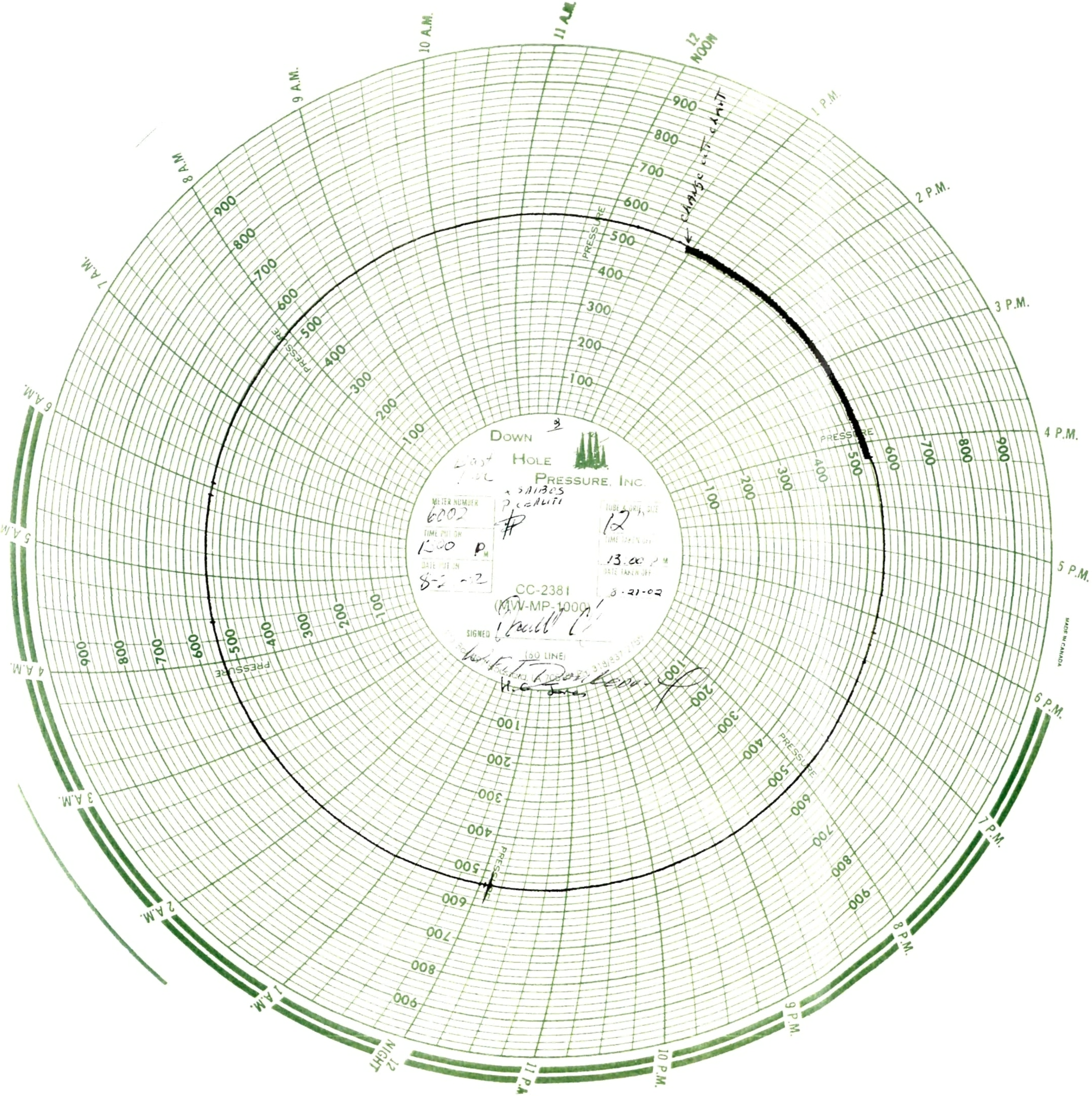
Weatherford Representative

ASHIBOS P. CERUTI H. G. Jones

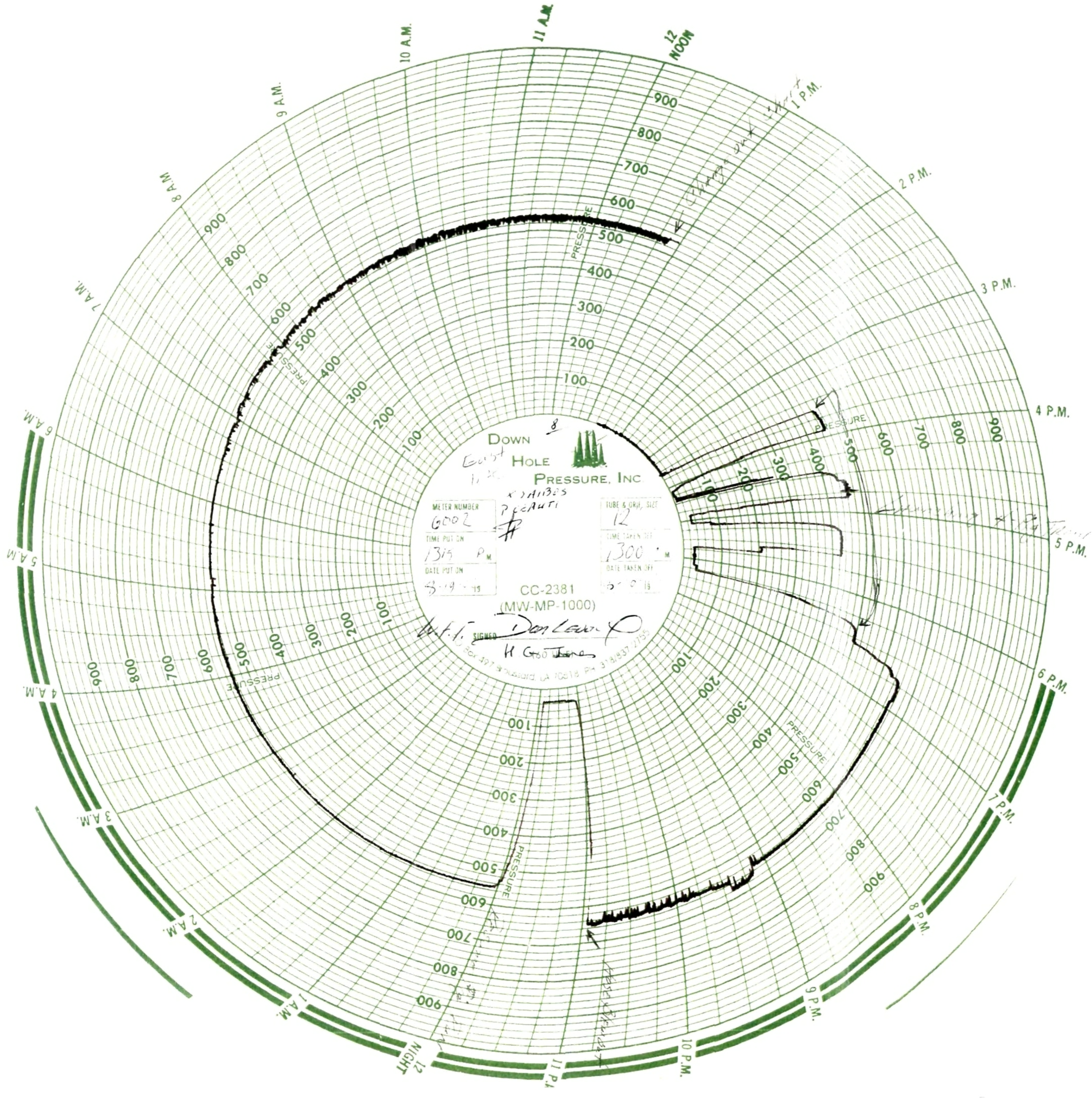
Inspector



Down Hole Pressure, Inc.
METER NUMBER
6002
TIME PUT ON
TUBE & ORIF. SIZE
12"
TIME TAKEN OFF
13:46
DATE PUT ON
8-22-02
DATE TAKEN OFF
8/22/02
CC-2381
(MW-MP-1000)
SIGNED
PRESSURE
12 NOON



DOWN HOLE PRESSURE, INC.
METER NUMBER
6002
TIME PUT ON
1200 PM
DATE PUT ON
8-2 -02
TUBE & ORIF. SIZE
12
TIME TAKEN OFF
13.00 PM
DATE TAKEN OFF
8-21-02
CC-2381
(MW-MP-1000)
SIGNED
(60 LINE)
PRESSURE
CHANGE OUT CHART
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
MADE IN CANADA


DOWN HOLE PRESSURE, INC.
METER NUMBER
6002
TIME PUT ON
1315 PM
DATE PUT ON
TUBE & ORIF. SIZE
12
TIME TAKEN OFF
1300 PM
DATE TAKEN OFF
CC-2381
(MW-MP-1000)
SIGNED
PRESSURE
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.

Pre-Flooding and First Pig Run
Initial Flushing and Cleaning

P.T.T Patrick hollier

Weatherford Pipeline & Specialty Services

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FILL LOG

FLOODING.

DATE 8-13 / 8-14-02 / 8-15-02

JOB PS-0216 LOCATION MP 261 East Leg UNITS FP-12 / HFP88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			
TIME	READING	GPM	FILTER	PIPE	TEMP.	OIL	RPM	TEMP.	OIL	RPM	REMARKS
23:15	30525	17003	60	220	160	50	1000	160	40	1200	Started Filling East Line
23:30	44530	1691	60	220	160	50	1000	170	40	1200	
24:00	90857	1691	60	220	160	50	1000	170	40	1200	
8-14-02											
00:30	141001	1700	60	220	160	45	1000	170	40	1200	
01:00	191373	1700	60	220	160	45	1000	170	40	1200	
01:15	215225	NOW MOVE TO WEST LINE									Total @ this time 215225
01:30	238338	1709	60	220	160	45	1000	170	40	1200	
01:45	266,996										Shut down pumping as per Williams Co.
8-14-02											
5	266,996	1788	50	285	160	55	1050	150	62	1400	Started Filling P/L
18:30	291,963	1947	50	285	162	48	1050	180	50	1600	
19:00	346,653	1894	60	285	160	48	1050	180	48	1600	
19:30	405,536	1894	60	285	160	48	1000	180	48	1600	
20:00	458,720	1894	60	285	160	48	1050	180	50	1600	East Line still sucking air.
20:30	513,833	1894	60	285	160	48	1050	180	48	1600	
21:00	573261	1894	60	285	160	48	1000	180	48	1600	
21:30	627,097	1894	60	285	160	48	1050	180	48	1600	
22:00	681,513										Shut down Filling oper. due to Plt. prob.
22:25	681,513										Started Filling P/L
22:30	695,257	1858	50	280	160	45	1000	180	50	1600	
23:00	751,524	1894	50	280	160	45	1000	180	48	1600	
23:30	806,601	1876	50	280	160	45	1000	180	48	1600	
23:50											Shut down Pump Pro[illegible]
24:00											Shut down
8-15-02											Changed Rubber
00:20											Started Filling P/L
30	877,216	1873	50	285	160	45	950	180	50	1400	
01:00	935,944	1947	50	285	160	45	1000	180	50	1400	

Vernon A Fontenot
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S.H.3.0S
P. CERUTI H.G. Jon[illegible]
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FILL LOG

FLOODING

DATE 8-15-02

JOB PS-0216 LOCATION MP 261 UNITS FP12/HFP88

8-15	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			
TIME	READING	GPM	FILTER	PIPE	TEMP.	OIL	RPM	TEMP.	OIL	RPM	REMARKS
01:30	996214	1964	50	285	160	45	1000	180	50	1400	
02:00	1054178	1947	50	285	160	45	1000	180	50	1400	
02:30	1106742	1947	50	285	160	45	1000	180	50	1400	
03:00	1163616	1947	50	285	160	45	1000	180	50	1400	East Line still sucking Air.
03:30	1236210	1947	50	285	160	45	1000	180	50	1400	
04:00	1278829	1947	50	285	160	45	1000	180	50	1400	
04:30	1336747	1955	50	285	160	45	1000	180	50	1400	
05:00	1393755	1973	50	285	160	45	1050	180	50	1400	
05:30	1433766	2008	50	285	160	45	1000	180	50	1400	
[illegible]00	1483293	2008	50	300	160	45	1000	180	50	1450	Changed Rpm FP12
[illegible]	1549865	2026	50	300	160	45	1000	180	50	1450	
07:00	1606813	1999	50	300	160	45	1000	180	50	1450	
07:30	1664267	2017	50	300	160	45	1000	180	50	1450	
08:00	1721853	2017	50	300	160	45	1000	180	50	1450	
08:30	1781289	2008	50	300	160	45	1000	180	50	1450	
09:00	1840555	2017	50	300	160	45	1000	180	50	1450	
09:30	1896301	2017	50	300	160	45	1000	180	50	1450	
10:00	1957899	2052	50	300	160	45	1000	180	50	1450	
10:30	2018724	2026	50	300	160	45	1000	180	50	1450	
11:00	2078281	2008	50	300	160	45	1000	180	50	1450	
11:30	2136576	2017	50	300	160	45	1000	180	50	1450	
12:00	2189188	2017	50	300	160	45	1000	180	50	1450	
12:30	2255269	2017	50	300	160	45	1000	180	50	1450	
13:00	2315684	2008	50	300	160	45	1000	180	50	1450	
13:30	2365008	2017	50	300	160	45	1000	180	50	1450	
14:00	2430432	1603	55	400	160	45	1000	180	50	1450	
[illegible]30	2467545	1356	50	400	160	45	1000	180	50	1500	
[illegible]	2504333	1347	50	420	160	45	1000	180	50	1450	
15:30	2544537	1206	50	440	155	45	1000	180	55	1500	

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FILL LOG

DATE 8-15-02 / 8-16-02

JOB PS-0216 LOCATION M P 261 UNITS FP-12/HFP98

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			
TIME	READING	GPM	FILTER	PIPE	TEMP.	OIL	RPM	TEMP.	OIL	RPM	REMARKS
16:00	2582633	1233	60	620	158	52	1275	180	55	1800 1800	
16:30	2618742	1171	60	680	158	52	1275	180	58	1800	
16:45	2646093										Shut down
16:55	2646093										Started Filling P/L
17:00	2652256	1717	60	620	158	52	1400	180	58	1750	
17:30	2676742	1039	60	635	160	55	1400	180	58	1750	
18:00	2710572	1004	60	640	160	55	1400	180	60	1750	
18:30	2735590	996	60	640	160	55	1400	180	60	1750	High P/L press.
18:35	2743074										Shut down pumps
18:40	2743074	580									Running L.H. Only.
55	2750576										Shut down Low Head
19:20	2750576										started Filling P/L
19:30	2761051	687	60	260	160	50	1000	170	35	1000	
20:00	2781179	651	60	280	150	50	1000	170	35	1000	East Line 200PSI
20:30	2799184	669	60	300	150	50	1050	170	40	1200	EAST LINE
21:00	2819700	651	60	300	150	50	1050	170	40	1200	240
21:11	282608										Line Full Received water
8-16-02			FRIST	Pig	Run	Starts		here			
00:45	4588										Verified pig Launched
02:40	4588										started pushing pig
03:00	15239	493	60	300	~~300~~ 160	50	1000	160	45	1200	
03:30	29522	493	60	315	150	47	1000	170	43	1200	
04:00	43698	502	60	315	160	50	1000	170	45	1200	
04:30	59845	502	60	315	150	50	1000	170	45	1200	P/L Press 240
05:00	73030	502	60	315	150	50	1000	170	45	1200	
05:30	87854	493	60	320	150	50	1000	170	45	1200	
06:00	101385	493	60	320	150	50	1000	170	45	1200	
:0	114640	493	60	320	150	50	1000	170	45	1200	
07:00	130880	493	60	320	150	50	1000	170	45	1200	

Vernon A. Fontenot
Weatherford Representative

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Inspector

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FILL LOG

DATE 8-16-02

JOB PS-0216 LOCATION M.P. 261 UNITS EP12/AEC 88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
TIME	READING	GPM	FILTER	~~PIPE~~ pump PSI	TEMP.	OIL	RPM	TEMP.	OIL	RPM		
07:30	145198	493	60	320	150	50	1000	170	45	1200		
08:00	160046	502	60	320	150	50	1000	170	45	1200		
08:30	174119	502	60	320	150	50	1000	170	45	1200		
09:00	187895	502	60	330	150	50	1000	170	45	1200		
09:30	202185	493	60	330	150	50	1000	170	45	1200	EAST P/L	WEST P/L
10:00	221513	484	60	380	150	50	1000	170	45	1400	320	75
10:30	230840	528	60	380	150	50	1000	170	50	1400	360	80
11:00	246306	528	60	380	150	50	1000	170	50	1400	370	80
11:30	262178	537	60	380	150	50	1000	170	50	1400	380	80
:00	278416	528	60	380	150	50	1000	170	50	1400	380	80
:30	292940	528	60	380	150	50	1000	170	50	1400	380	80
13:00	308612	528	60	380	150	50	1000	170	50	1400	380	80
13:30	323730	528	60	380	150	50	1000	170	50	1400	380	90
14:00	339247	528	60	380	150	50	1000	170	50	1400	380	90
14:30	354430	528	60	380	150	50	1000	170	50	1400	380	90
15:00	396570	528	60	380	150	50	1000	170	50	1400	380	90
15:30	385378	519	60	380	150	50	1000	170	50	1400	380	90
16:00	400288	519	60	380	150	50	1000	170	50	1400	380	90
16:30	415717	528	60	380	150	50	1000	175	50	1400	380	90
17:00	430999	528	60	380	150	50	1000	175	50	1400	380	90
17:30	445232	519	60	380	150	50	1000	175	50	1400	380	90
18:00	461472	519	60	380	150	50	1000	175	50	1400	380	100
18:30	477749	519	60	380	150	50	1000	175	50	1400	380	95
19:00	491516	519	60	380	150	50	1000	175	50	1400	380	95
19:30	507413	519	60	380	150	50	1000	175	50	1400	380	95
20:00	521991	519	60	380	150	50	1000	175	50	1400	380	95
:30	536795	519	60	380	150	50	1000	175	50	1400	380	95
.00	551982	519	60	380	150	50	1000	175	50	1400	380	95
21:30	567566	519	60	380	150	50	1000	175	50	1400	380	95

Vernon A. Fontenot
Weatherford Representative

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P. Cerwill H. G. Inc
Inspector

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FILL LOG

DATE 8-16-02 / 8-17-02

JOB PS-0216 LOCATION MP 261 UNITS FP12 / HFP 99

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			EAST P/L Press	WEST P/L Press
TIME	READING	GPM	FILTER	~~PIPE~~ Pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	REMARKS	
22:00	583074	519	60	380	150	50	1000	175	50	1400	380	105
22:30	601335	519	60	380	150	50	1000	175	50	1400	380	105
23:00	613054	519	60	380	150	50	1000	175	50	1400	380	105
23:30	627456	519	60	380	150	50	1000	175	50	1400	380	105
23:45											Platform said to bring press to 300 PSI	
24:00	642395	431	60	300	150	50	1000	170	50	1200	300	95
*8-17-02												
00:30	657049	440	60	310	150	50	1000	170	40	1200	300	95
01:00	668784	440	60	300	150	50	1000	170	40	1200	300	95
:30	681010	440	60	300	150	50	1000	170	40	1200	300	95
:00	692430	440	60	300	150	50	1000	170	40	1200	300	95
02:30	705650	440	60	300	150	50	1000	170	40	1200	300	80
02:40											5 stage HFP 99 down w/ Fuel Filters	
02:50											HFP 99 Back running	
03:00	715132	537	60	300	150	50	1000	170	45	1200	300	50
03:30	729502	483	60	340	150	50	1000	170	45	1200	320	100
04:00	739708	514	60	300	150	50	1000	170	45	1200	300	95
04:30	750302	475	60	300	150	50	1000	170	45	1200	300	95
05:00	No Readings due to changing Fuel Filters HFP 99											
05:30	774626	510	60	320	150	50	1000	175	45	1300	320	65
06:00	785776	352	60	220	150	50	1000	175	45	1200	220	90
06:30	797954	466	60	280	150	50	1000	175	40	1200	280	75
07:00	811026	440	60	280	150	50	1000	175	40	1200	280	75
07:30	823824	449	60	280	150	50	1000	175	40	1200	280	90
08:00	836860	440	60	280	150	50	1000	175	40	1200	280	80
08:30	851957	475	60	320	150	50	1000	175	45	1250	320	85
:00	865977	510	60	360	150	50	1000	175	50	1350	360	90
:30	880711	510	60	360	150	50	1000	175	50	1350	360	90
10:00	895406	519	60	370	150	50	1000	175	50	1350	370	90

Vernon A. Fontenot
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FILL LOG

DATE 8-17-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/14FP-88

TIME	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
	READING	GPM	FILTER	~~PIPE~~ Pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	East	West
10:30	910537	510	60	360	150	50	1000	175	50	1350	370	90
11:00	925904	519	60	360	150	50	1000	175	50	1350	370	90
11:30	939612	510	60	360	150	50	1000	175	50	1350	370	90
12:00	955237	502	60	360	150	50	1000	175	50	1350	370	90
12:30	969863	510	60	360	150	50	1000	175	50	1350	370	90
13:00	985631	510	60	360	150	50	1000	175	50	1350	360	80
13:30	1000572	510	60	360	150	50	1000	175	50	1350	360	70
14:05	Shut down due to changing check valve 4"											
16:45	1000512	942	60	650	150	50	1400	175	60	1750	620 Started Filling P/L	30
17:00	1034565	872	60	725	160	55	1400	175	60	1900	725	70
:10	Shut down Blown Hose											
17:30											Started Filling P/L	
18:00	1072375	722	60	560	150	55	1300	180	58	1600	520	60
18:35	Shut down Blown Hose @ crimp end											
18:45											Back to Filling P/L	
19:00	1114368	678	60	520	150	55	1200	180	58	1600	480	35
19:30	1132558	695	60	540	150	55	1200	175	58	1600	500	45
20:00	1153854	695	60	540	150	55	1200	170	58	1600	510	45
20:30	1172976	695	60	540	150	55	1200	175	58	1600	510	45
21:00	1192565	695	60	540	150	55	1200	175	58	1600	510	45
21:30	1212992	695	60	540	150	45	1200	175	58	1600	510	45
22:00	123307	695	60	540	150	45	1200	175	58	1600	510	45
22:30	1251696	695	60	540	150	55	1200	175	58	1600	510	40
23:00	1273747	695	60	540	150	55	1200	175	58	1600	510	40
23:30	1293742	695	60	540	150	55	1200	175	58	1600	510	40
24:00	1317836	695	60	540	150	55	1200	175	58	1600	510	35
8-18-02												
:30	1334501	695	60	540	150	55	1200	175	58	1600	510	35
01:00	1354646	695	60	540	150	55	1200	175	58	1600	510	35

Vernon A. Fontenot
Weatherford Representative

x SAIBOS
P. CERUTI H. G. Jones
Inspector

Weatherford Pipeline & Specialty Services

308 Pinehurst Street • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

FILL LOG

DATE 8-18-02

JOB PS-0216 LOCATION M.P. 261 UNITS FP-12/HEP 99

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
TIME	READING	GPM	FILTER	~~PIPE~~ Pump	TEMP.	OIL	RPM	TEMP.	OIL	RPM	East	West
01:30	1374894	695	60	540	150	55	1200	175	58	1600	510	35
02:00	1394905	695	60	540	150	55	1200	175	58	1600	510	35
02:30	1415472	695	60	540	150	55	1200	175	58	1600	510	35
03:00	1435049	695	60	540	150	55	1200	175	58	1600	510	35
03:30	1455623	695	60	540	150	55	1200	175	58	1600	510	35
04:00	1475751	695	60	540	150	55	1200	175	58	1600	510	35
04:30	1496651	695	60	540	150	55	1200	175	58	1600	510	35
05:00	1516309	695	60	540	150	55	1200	175	58	1600	510	35
05:30	1537074	695	60	540	150	55	1200	175	58	1600	510	35
06:00	1556085	695	60	540	150	55	1200	175	58	1600	510	35
30	1576933	695	60	540	150	55	1200	175	58	1600	510	35
07:00	1597311	695	60	540	150	55	1200	175	58	1600	510	40
07:30	1617237	695	60	540	150	55	1200	175	58	1600	510	40
08:00	1637418	695	60	540	150	55	1200	175	58	1600	510	40
08:30	1658357	687	60	540	150	55	1200	175	58	1600	510	40
09:00	1678048	695	60	540	150	55	1200	175	58	1600	510	40
09:30	1699621	713	60	550	150	55	1200	175	58	1700	540	40
10:00	1721102	748	60	560	150	55	1200	175	58	1700	580	45
10:30	1742716	748	60	560	150	55	1200	175	58	1700	580	45
11:00	1764441	740	60	590	150	55	1200	175	58	1700	580	45
11:30	1785630	748	60	600	150	55	1200	175	58	1700	580	45
12:00	1807635	748	60	600	150	55	1200	175	58	1700	580	45
12:30	1829436	740	60	600	150	55	1200	175	58	1700	580	45
13:00	1853758	757	60	600	150	55	1200	175	58	1700	580	45
13:30	1872530	757	60	600	150	55	1200	175	58	1700	580	40
14:00	1896311	748	60	600	150	55	1200	175	58	1700	580	40
14:30	1917693	758	60	600	150	55	1200	175	58	1700	580	40
00	1941632	748	60	600	150	55	1200	175	58	1700	580	40
15:30	1961895	748	60	600	150	55	1200	175	58	1700	580	40

Vernon A. Fontenot
Weatherford Representative

x 5A1303
PICERUTI H.C.
Inspector

Weatherford Pipeline & Specialty Services

308 Pinehurst Street • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

FILL LOG

DATE 8-18-02/8-19-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/HFP 88

	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP			REMARKS	
TIME	READING	GPM	FILTER	PIPE	TEMP.	OIL	RPM	TEMP.	OIL	RPM	EAST	WEST
16:00	1983351	757	60	600	150	55	1200	175	58	1700	580	40
16:30	2005690	757	60	600	150	55	1200	175	58	1700	580	40
17:00	2027516	748	60	600	150	55	1200	175	58	1700	580	40
17:30	2048693	748	60	610	150	55	1200	175	58	1700	580	40
18:00	2071289	748	60	620	150	55	1200	175	58	1700	580	40
18:30	2094661	748	60	620	150	55	1200	175	58	1700	580	40
19:00	2114053	748	60	620	150	55	1300	180	58	1700	580	35
19:30	2135973	748	60	620	150	55	1300	180	58	1700	580	35
20:00	2158834	748	60	620	150	55	1300	180	58	1700	580	40
--:30	2180462	748	60	620	150	55	1300	180	58	1700	580	40
10	2202048	748	60	620	150	55	1300	180	58	1700	580	35
21:30	2225294	748	60	620	150	55	1300	180	58	1700	580	40
22:00	2247661	748	60	620	150	55	1300	180	58	1700	580	35
22:30	2268770	748	60	620	150	55	1300	180	58	1700	580	35
23:00	2289644	748	60	620	150	55	1300	180	58	1700	580	35
2330	2311404	748	60	620	150	55	1300	180	58	1700	580	35
24:00	2334421	748	60	620	150	55	1300	180	58	1700	580	35
8-19-02												
00:30	2355024	748	60	620	150	55	1300	180	58	1700	580	35
01:00	2378466	748	60	620	150	55	1300	180	58	1700	580	35
01:30	2399429	748	60	620	150	55	1300	180	58	1700	580	35
02:00	2421634	748	60	620	150	55	1300	180	58	1700	580	35
02:30	2444263	748	60	620	150	55	1300	180	58	1700	580	35
03:00	2467932	748	60	620	150	55	1300	180	58	1700	580	35
03:30	2487276	748	60	620	150	55	1300	180	58	1700	580	35
04:00	2510112	748	60	620	150	55	1300	180	58	1700	580	35
--:30	2532585	748	60	620	150	55	1300	180	58	1700	580	35
.00	2552430	748	60	620	150	55	1300	180	58	1700	580	35
05:30	2578110	748	60	620	150	55	1300	180	58	1700	580	35

Vernon A. Fontenot
Weatherford Representative

x SAIBOS
P. CERUTI H. G. I[illegible]
Inspector

Weatherford Pipeline & Specialty Services
308 Pinehurst Street • Lafayette, Louisiana 70508 • Phone 337-291-9232 • Fax 337-291-1796

FILL LOG

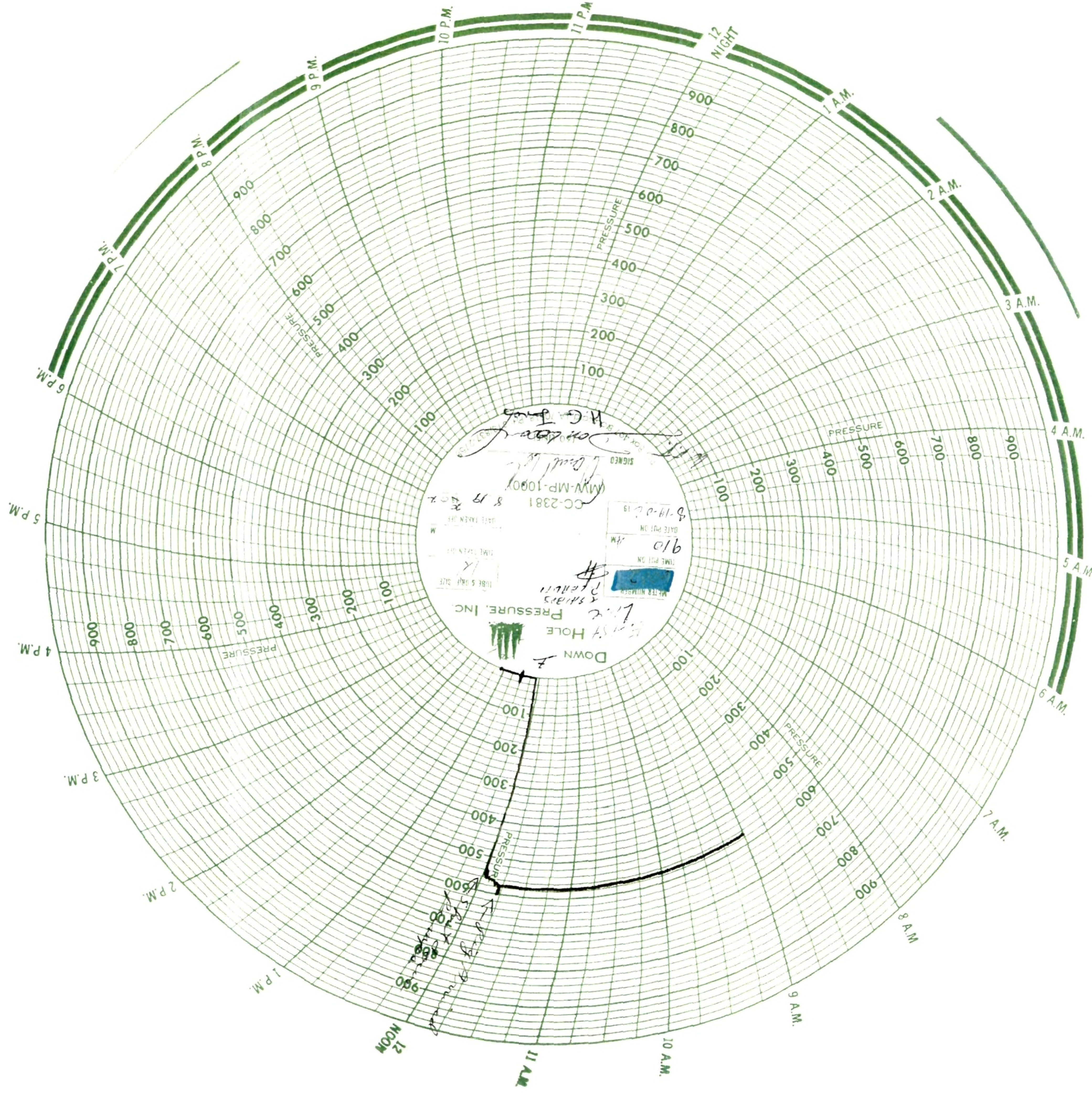
DATE 8-19-02

JOB PS-0216 LOCATION MP 261 UNITS FP-12/HFP 88

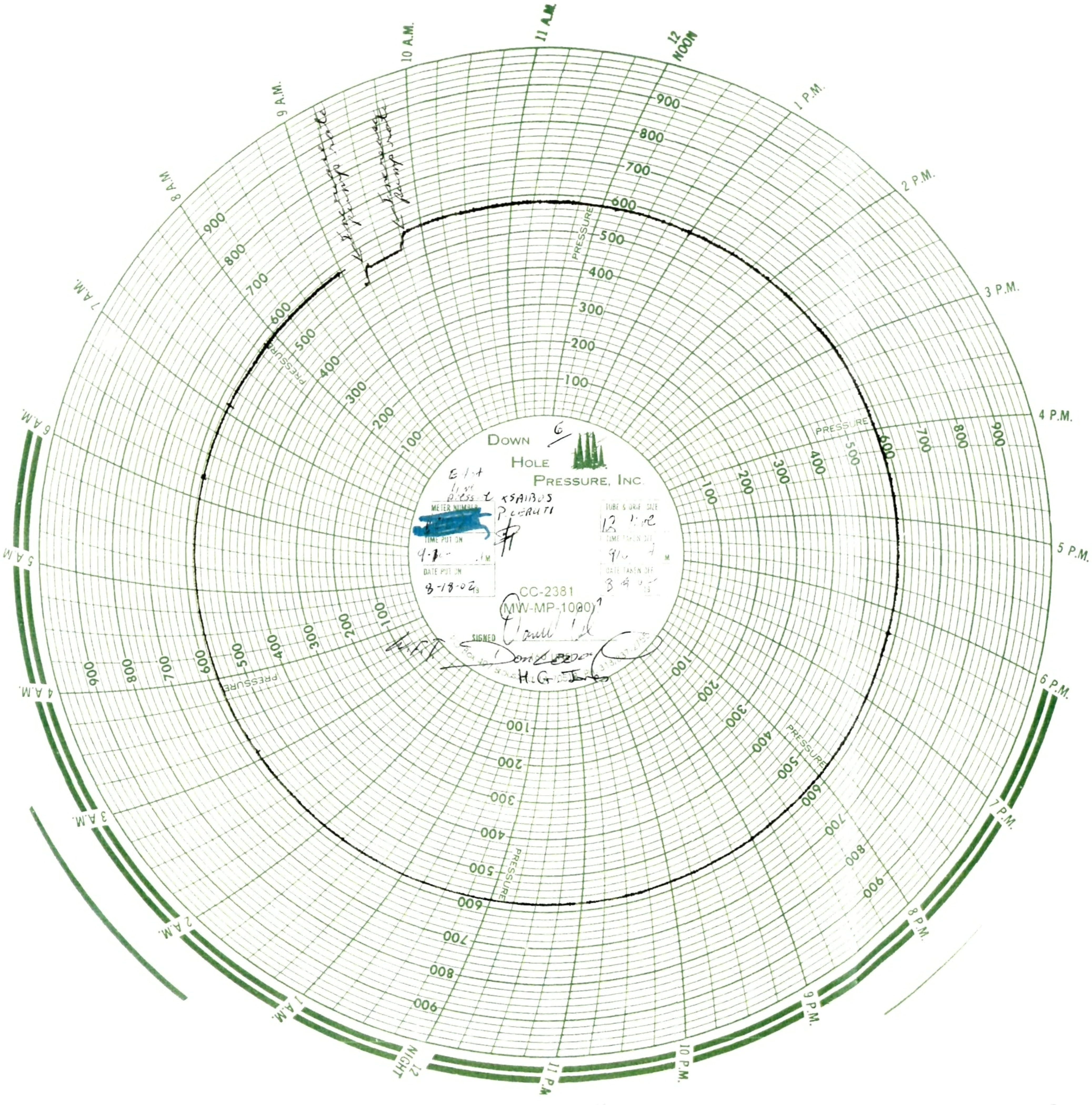
	FLOW METER		P.S.I.		LO HEAD PUMP			FILL PUMP					
TIME	READING	GPM	FILTER	Pump ~~PIPE~~	TEMP.	OIL	RPM	TEMP.	OIL	RPM	PSI EAST	REMARKS	PSI WEST
06:00	2597618	748	60	620	150	55	1300	180	58	1700	580		35
06:30	2619378	740	60	620	150	55	1300	180	58	1700	580		35
07:00	2641409	748	60	620	150	55	1300	180	58	1700	580		35
07:30	2664060	745	60	620	150	55	1300	180	58	1700	570		40
08:00	2684317	757	60	620	150	55	1300	180	58	1700	570		40
08:30	2706777	757	60	610	150	55	1300	180	58	1700	570		40
09:00	2727864	757	60	610	150	55	1300	180	58	1700	570		40
09:30	2750412	757	60	610	150	55	1300	180	58	1700	570		40
10:00	2771686	757	60	610	150	55	1300	180	58	1700	570		40
10:30	2795218	748	60	610	150	55	1300	180	58	1700	570		40
20	2815975	748	60	610	150	55	1300	180	58	1700	570		40
11:30	2838935	748	60	610	150	55	1300	180	58	1700	570		40
12:00	2858944	748	60	610	150	55	1300	180	58	1700	570		40
12:10	2867864		Shut down Pumps								Received pig		

Vernon A. Fontenot
Weatherford Representative

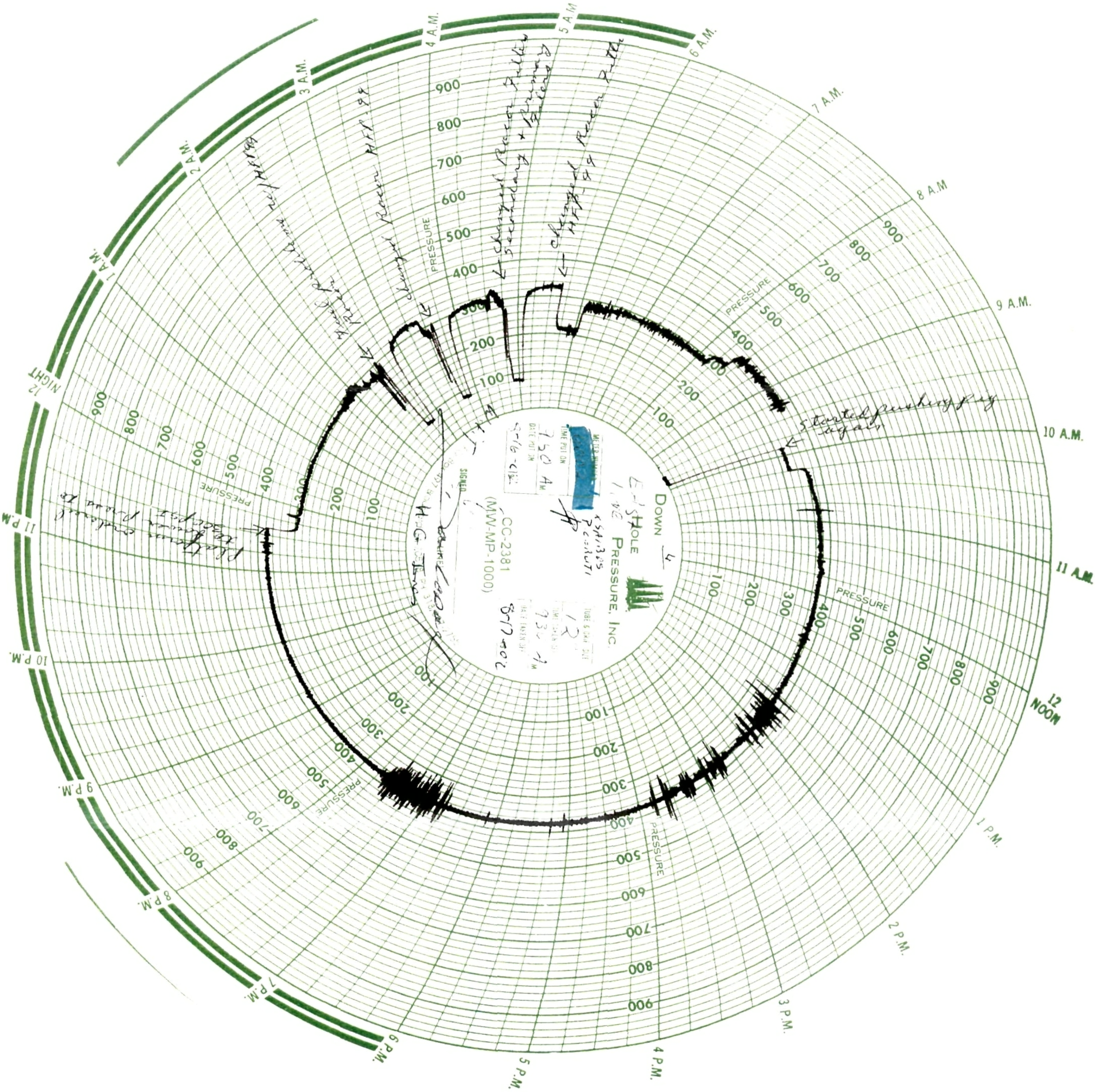
x SAIBES
P. CERUTI H.G. Inc
Inspector



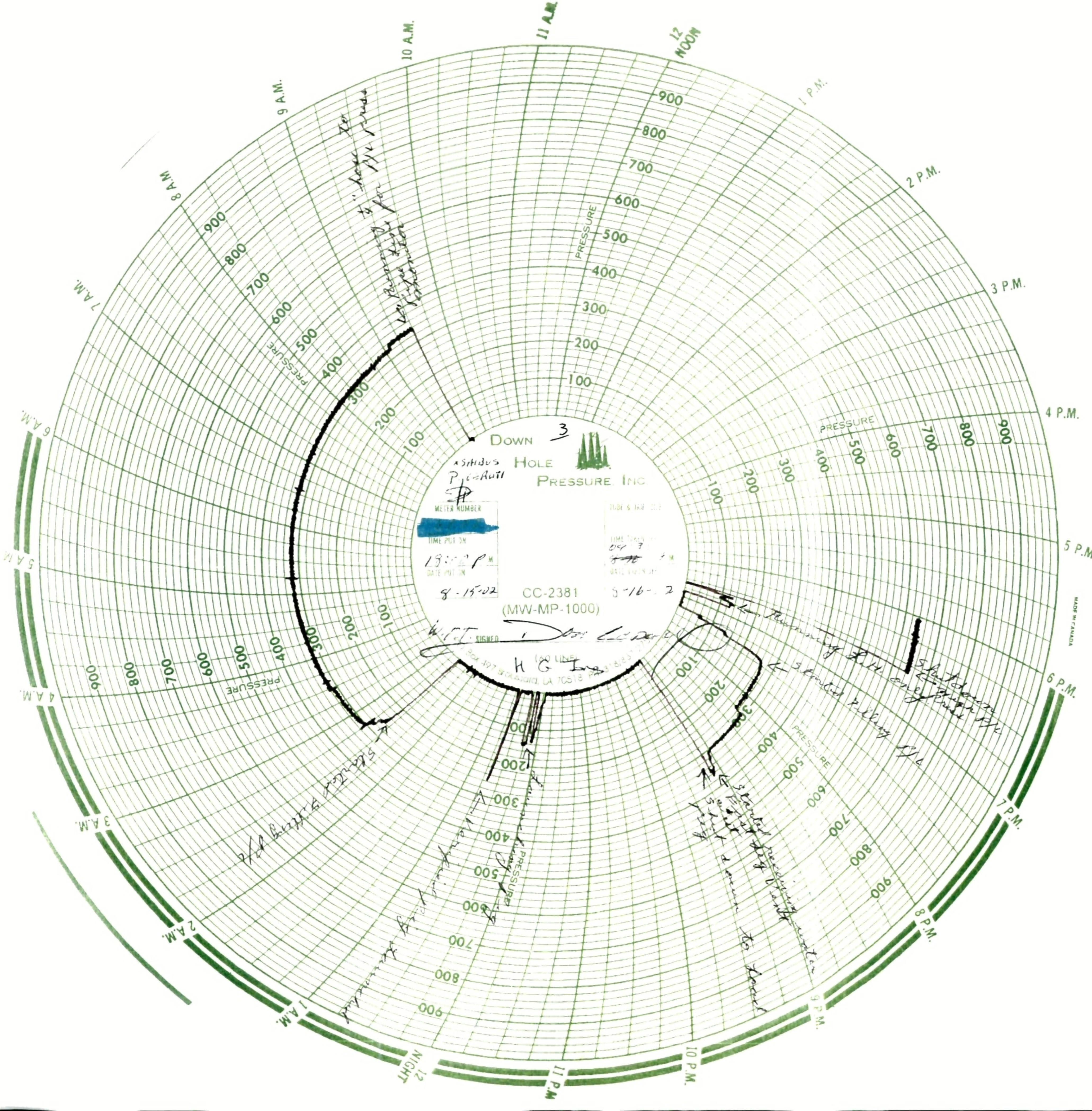
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
PRESSURE
100
200
300
400
500
600
700
800
900
CC-2381
MW-MP-1000
DOWN HOLE PRESSURE, INC.
SIGNED
DATE PUT ON
TIME PUT ON
DATE TAKEN OFF
TIME TAKEN OFF
METER NUMBER
TUBE & GATE SIZE

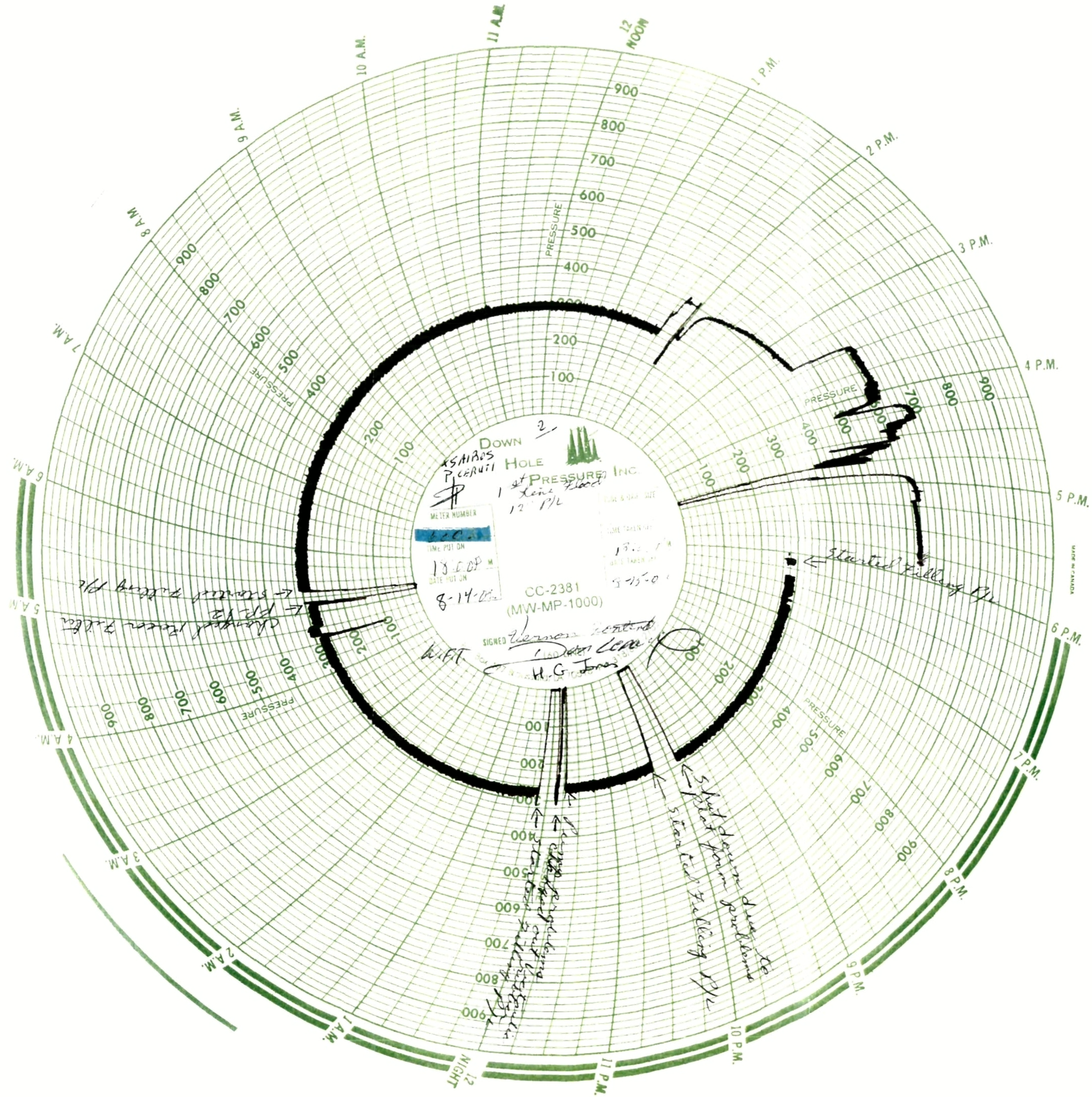


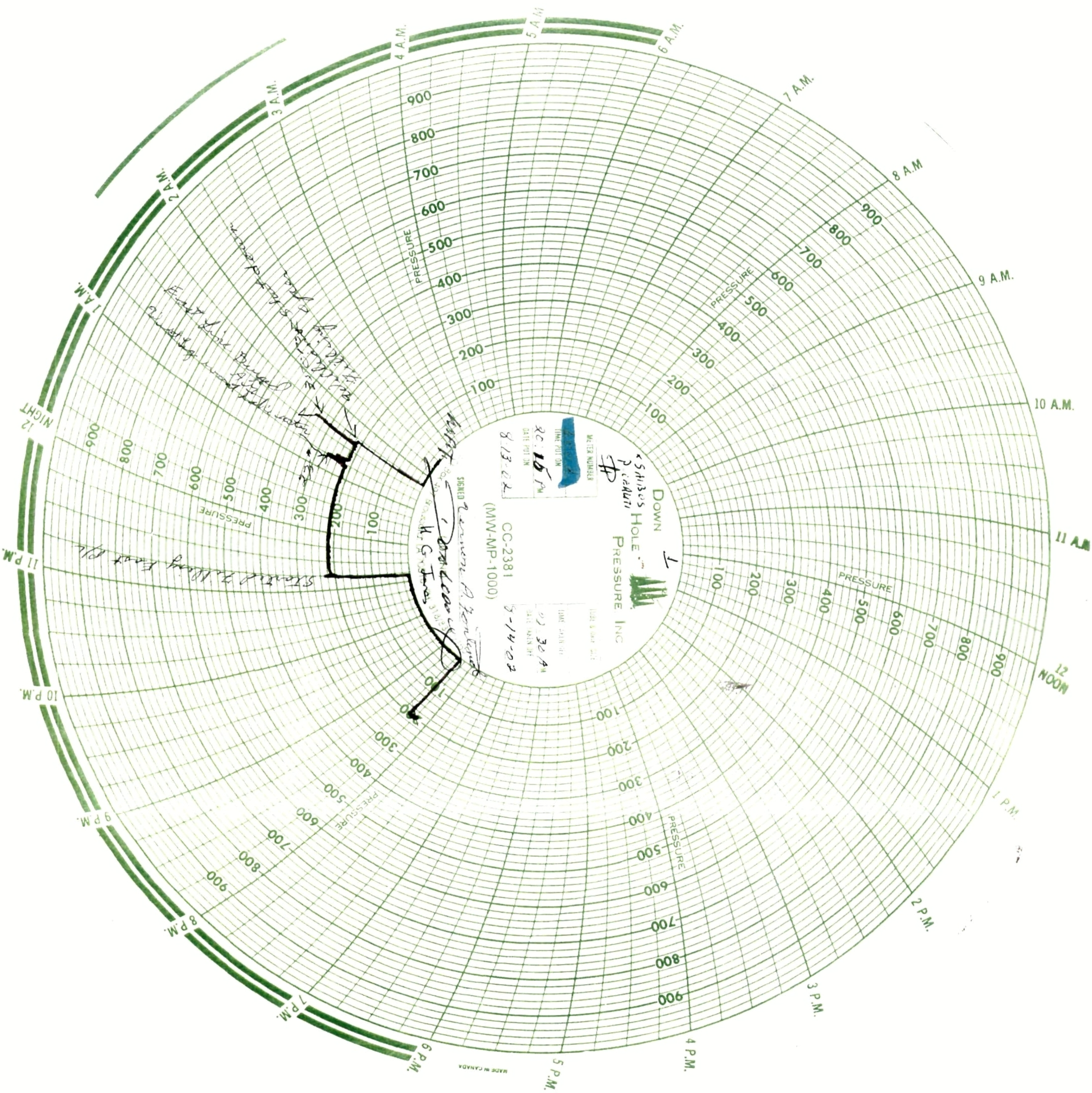
Down Hole Pressure, Inc.
METER NUMBER
TIME PUT ON
DATE PUT ON
8-18-02
TUBE & ORIF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
CC-2381
(MW-MP-1000)
SIGNED
PRESSURE
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.



DOWN-HOLE PRESSURE, INC.
CC-2381
(MW-MP-1000)
SIGNED
PRESSURE
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
Started pushing pig again


DOWN HOLE PRESSURE, INC
METER NUMBER
TIME PUT ON
DATE PUT ON
8-15-02
8-16-02
CC-2381
(MW-MP-1000)
SIGNED
PRESSURE


DOWN HOLE PRESSURE INC.
METER NUMBER
TIME PUT ON
18:00 P.M.
DATE PUT ON
8-14-
CC-2381
(MW-MP-1000)
SIGNED
1st Line Flood
12" P/L
PRESSURE
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
MADE IN CANADA
Started Filling P/L
Started Filling P/L
Shut down due to platform problems
Started Filling P/L
H. G. Jones



DOWN HOLE PRESSURE INC
CC-2381
(MW-MP-1000)
PRESSURE
METER NUMBER
TIME PUT ON
DATE PUT ON
TIME TAKEN OFF
DATE TAKEN OFF
SIGNED
MADE IN CANADA

HOLE
PRESSURE, INC.
INSTRUMENT RENTALS & REPAIRS

Phone (337) 837-2755
Fax (337) 837-2756

P.O. Box 497
408 N. Eola Rd.
Broussard, LA. 70518

Surface Gauges
Dead Weight Testers
Barton Recorders
Vaetrix Gauge 1
5, 10, & 20,000 PSI

Sub Surface Gauges
Electronic & Mechanical
0-25,000 PSI Ranges
Temperature Gauges
0-450 Degrees F.

CALIBRATION CERTIFICATE

DESCRIPTION Brass Dead Weight Tester SERIAL NUMBER 09055 @7002

PRESSURE RANGE 20000 0.05% FULL SERVICE +/- 10 P.S.I.

PRESSURE INCREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
0	0	0
2,000	2,000	0
4,000	[illegible]	0
6,000	6,000	0
8,000	8,000	0
10,000	10,000	0
12,000	12,000	0
14,000	14,000	0
16,000	16,000	0
18,000	18,000	0
20,000	20,000	0

PRESSURE DECREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
20,000	20,000	0
18,000	18,000	0
16,000	16,000	0
14,000	14,000	0
12,000	12,000	0
10,000	10,000	0
8,000	8,000	0
6,000	6,000	0
4,000	4,000	0
2,000	2,000	0
0	0	0

Calibrated in VERTICAL **Position** **Instrument Room Temp.** 75 **F.**

This is to certify that this instrument has been inspected and tested against Pressure Standard Chandler Engineering Dead Weight Tester Model # 58-200H, Serial # 16210 traceable to the National Institute of Standards and Technology, (NIST) Reference # 822/256610 (105), Calibrated (03/14/2002). Calibration Certification No. 030502. Certified Deadweight S/N 14626. The calibration systems conforms to the requirements of MIL-STD. 45662 as ISO-9000 procedures. Procedure #MT-P-142.

DATE OF CALIBRATION 06\12\2002
CALIBRATION DUE DATE 12\12\2002

TECHNICIAN NATHAN HEBERT
Nathan Hebert

DOWN
HOLE
PRESSURE, INC.
INSTRUMENT RENTALS & REPAIRS

Phone (337) 837-2755
Fax (337) 837-2756

P.O. Box 497
408 N Eola Rd
Broussard, LA 70518

Surface Gauges
Dead Weight Testers
Barton Recorders
Vaetrix Gauge 1
5, 10, & 20,000 PSI

Sub Surface Gauges
Electronic & Mechanical
0-26,000 PSI Ranges
Temperature Gauges
0-450 Degrees F.

CALIBRATION CERTIFICATE

DESCRIPTION BARTON METER SERIAL NUMBER M2387 & 6002

PRESSURE RANGE 1000 ACCURACY+/- 1% FULL SERVICE +/- 10 P.S.I.

PRESSURE INCREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
0	0	0
200	200	0
400	400	0
600	600	0
800	800	0
1,000	1,000	0

PRESSURE DECREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
1,000	1,000	0
800	800	0
600	600	0
400	400	0
200	200	0
0	0	0

Calibrated in VERTICAL **Position** **Instrument Room Temp.** 74 **F.**

This is to certify that this instrument has been inspected and tested against Pressure Standard Chandler Engineering Dead Weight Tester Model # 58-200H, Serial # 16210 traceable to the National Institute of Standards and Technology, (NIST) Reference # 822/256610 (105), Calibrated (03/14/2002). Calibration Certification No. 030502. Certified Deadweight S/N 14626. The calibration systems conforms to the requirements of MIL-STD. 45662 as ISO-9000 procedures. Procedure #MT-P-142.

DATE OF CALIBRATION 07/24/02
CALIBRATION DUE DATE 01/24/03

TECHNICIAN REGGIE SAVOIE

HOLE
PRESSURE, INC.
INSTRUMENT RENTALS & REPAIRS

Phone (337) 837-2755
Fax (337) 837-2756

P.O. Box 497
408 N. Eola Rd.
Broussard, LA. 70518

Surface Gauges
Dead Weight Testers
Barton Recorders
Vaetrix Gauge I
5, 10, & 20,000 PSI

Sub Surface Gauges
Electronic & Mechanical
0-25,000 PSI Ranges
Temperature Gauges
0-450 Degrees F.

CALIBRATION CERTIFICATE

DESCRIPTION TEMPERATURE RECORDER SERIAL NUMBER 242E-47298 & 5036

TEMP. RANGE 0 TO 150 ACCURACY+/- 1% FULL SERVICE +/- 1.5 F P.S.I.

TEMPERATURE INCREASING TEMPERATURE		
TEMPERATURE	TEMPERATURE	DIFFERENCE
32	32	0
60	60	0
90	90	0
120	120	0
150	150	0

TEMPERATURE DECREASING TEMPERATURE		
TEMPERATURE	TEMPERATURE	DIFFERENCE
150	150	0
120	120	0
90	90	0
60	60	0
32	32	0

Calibrated in VERTICAL Position Instrument Room Temp. 70 F.

This is to certify that this instrument has been inspected and tested against Digital Thermometer No. 394398. Calibrated (05/17/01). Traceable to the National Institute of Standards & Technology (NIST). Lab Accurate Digital Thermometer Mobil TM 99 (Psot Thermometer). S/N: 3006. Down Hole Pressure Inc. calibration procedure reference ITT Barton model # 242 E & 202A installation & operation manual.

DATE OF CALIBRATION 02/04/02
CALIBRATION DUE DATE 08/04/02

TECHNICIAN REGGIE SAVOIE

DOWN
HOLE
PRESSURE, INC.
INSTRUMENT RENTALS & REPAIRS

Phone (337) 837-2755
Fax (337) 837-2756

P.O. Box 497
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Broussard, LA. 70518

Surface Gauges
Dead Weight Testers
Barton Recorders
Vaetrix Gauge 1
6, 10, & 20,000 PSI

Sub Surface Gauges
Electronic & Mechanical
0-25,000 PSI Ranges
Temperature Gauges
0-450 Degrees F.

CALIBRATION CERTIFICATE

DESCRIPTION BARTON METER   SERIAL NUMBER M2459 & 60[illegible]

PRESSURE RANGE 10000   ACCURACY+/- 1%   FULL SERVICE +/- 100 P.S.I.

PRESSURE INCREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
0	0	0
2,000	2,000	0
4,000	4,000	0
6,000	6,000	0
8,000	8,000	0
10,000	10,000	0

PRESSURE DECREASING PRESSURE		
APPLIED PRESSURE	INDICATED PRESSURE	DIFFERENCE
10,000	10,000	0
8,000	8,000	0
6,000	6,000	0
4,000	4,000	0
2,000	2,000	0
0	0	0

Calibrated in VERTICAL **Position**   **Instrument Room Temp.** 75 **F.**

This is to certify that this instrument has been inspected and tested against Pressure Standard Chandler Engineering Dead Weight Tester Model # 58-200H, Serial # 16210 traceable to the National Institute of Standards and Technology, (NIST) Reference # 822/256610 (105), Calibrated (03/14/2002). Calibration Certification No. 030502. Certified Deadweight S/N 14626. The calibration systems conforms to the requirements of MIL-STD. 45662 as ISO-9000 procedures. Procedure #MT-P-142.

DATE OF CALIBRATION 06\17\2002
CALIBRATION DUE DATE 12\17\2002

TECHNICIAN NATHAN HEBERT
Nathan Hebert

HOLE
PRESSURE, INC.
INSTRUMENT RENTALS & REPAIRS

Fax (337) 837-2756

P.O. Box 497
408 N. Eola Rd.
Broussard, LA. 70518

Surface Gauges
Dead Weight Testers
Barton Recorders
Vaetrix Gauge 1
5, 10, & 20,000 PSi

Sub Surface Gauges
Electronic & Mechanical
0-25,000 PSI Ranges
Temperature Gauges
0-450 Degrees F.

CALIBRATION CERTIFICATE

DESCRIPTION TEMPERATURE RECORDER **SERIAL NUMBER** M2356 & 5040

TEMP. RANGE 0 TO 150 **ACCURACY+/-** 1% **FULL SERVICE +/-** 1.5 F **P.S.I.**

TEMPERATURE INCREASING TEMPERATURE		
TEMPERATURE	TEMPERATURE	DIFFERENCE
32	32	0
60	60	0
90	90	0
120	120	0
150	150	0

TEMPERATURE DECREASING TEMPERATURE		
TEMPERATURE	TEMPERATURE	DIFFERENCE
150	150	0
120	120	0
90	90	0
60	60	0
32	32	0

Calibrated in VERTICAL **Position** **Instrument Room Temp.** 72 **F.**

This is to certify that this instrument has been inspected and tested against Digital Thermometer No. C417417. Calibrated (04/12/02). Traceable to the National Institute of Standards & Technology (NIST)#1005012032. Lab Accurate Digital Thermometer Mobil TM 99 (Psot Thermometer). S/N: 2032.

DATE OF CALIBRATION 06/03/02
CALIBRATION DUE DATE 12/03/02

TECHNICIAN REGGIE SAVOIE

APPENDIX A: HYDROSTATIC TEST RECORD AND CERTIFICATE

Report No: 01 Date: 08/26/02

Company: CEPT
Flowline/Riser: EAST/WEST FLOWLINES - FDS CANYON STATION PROJECT
Testing Contractor: WEATHERFORD
Construction Contractor: SAIPEM SAIBOS
Testing Specification: API 1110

Test Limits/Type of Construction

Flowline/Riser System Test Limits: EAST/WEST FLOWLINES - RISER - HP 261 JP -
New Construction: YES Repair: NA

Pipe Design Data

Spec & Grade	Weld Joint Factor	OD	Wt	SMYS	Design Pressure
API 5L - X65		12.75"	1.125" 0.900" 0.855" 0.800"	8157 psi FOR X65	5943 psi AT EL. + 0 ft.

Medium Data

Type and Source of Test Medium: SEA WATER
Additive(s) (Mfg. and Product Name):
Dye: TADCO - TRACER FLURO XL 500 - LIQUID - Quantity: 74 GLS Dosage: 25 PPM
Film Forming Inhibitor: NA Quantity: NA Dosage: NA
Oxygen Scavenger: NA Quantity: NA Dosage: NA
Biocide: NA Quantity: NA Dosage: NA

Pressure Test Data Summary

Test Pressure 7492 psi Min. 7488 psi %SMYS 91.80 Max 7492 psi - 91.85 %SMYS
Elevations Low Point NA High Point +52 ft DWT +52 ft Pump +52 ft
Began Test Date 08/25/02 ÷ 08/26/02 Time 05.23 pm ÷ 01.23 am.
Location of Measurement Point for Test Data: HP 261 JP

Testing and Recording Witnessed By: PIETRO CERUTI Date: 08/26/02

Company Representative: H.G. JONES Title:
Testing Pressures: Max. 7492 psi for % SMYS 91.85
Min. 7488 psi for % SMYS 91.80
Qualified to Operate at: for % SMYS

Report Check By: P. CERUTI - SAIBOS Date: 08/26/02
Approved By: H.G. Jones Title: TFE Representative
Company: TFE

SB Construction and Maritime Services BV	SITE MEMO CANYON STATION PLATFORM	No : 001 Date : August 22,2002
Client : CEPT	Project : FDS - Canyon Express Project	Ref : CS/CE/SM/001
Loc : Gulf of Mexico	Activity Phase : Final cleaning/ gauging of flowlines	
	Subject : CEPT acceptance of final cleaning/ gauging of flowlines	

Final cleaning/ gauging of flowlines has been completed on August 22nd, 02.

The pig train has been launched on August 19th, 02 from Canyon Station - Permanent pig launcher (east line), and received on August 22nd, 02 at Canyon Station - Permanent pig receiver (west line).

The pig train was made up of the following pigs:
- Pig no.1: bi-di brush pig
- Pig no.2: bi-di brush pig
- Pig no.3: bi-di seal pig
- Pig no.4: bi-di gauge pig

Original diameters are the following:
- Guiding discs: 10.4 inch (264.2mm)
- Sealing discs: 11.5 inch (292.1mm)
- Gauge plate: 9.55 inch (242.6mm)

Here after are - for all 4 pigs - the arrival time at Canyon Station / General condition of pig / Measured diameters after cleaning - gauging of flowlines:

Pig no.1 (bi-di brush pig):
- Arrival time at Canyon Station: August 22nd, 02 @ 11:38am
- General condition: good
- Front sealing disc diameter: 2 measurements: 10.83-inch and 10.87-inch --> wear 0.65-inch (16.6mm)
- Rear sealing disc diameter: 2 measurements: 10.87-inch and 10.91-inch --> wear 0.61-inch (15.6mm)
- Front & rear guide disc diameter: 10.35-inch --> wear 0.05-inch (1.3mm)

Pig no.2 (bi-di brush pig):
- Arrival time at Canyon Station: August 22nd, 02 @ 11:48am
- General condition: good
- Front sealing disc diameter: 2 measurements: 10.94-inch and 10.98-inch --> wear 0.53-inch (13.6mm)
- Rear sealing disc diameter: 2 measurements: 10.91-inch and 10.94-inch --> wear 0.57-inch (14.6mm)
- Front & rear guide disc diameter: 10.31-inch --> wear 0.09-inch (2.2mm)

Pig no.3 (bi-di seal pig):
- Arrival time at Canyon Station: August 22nd, 02 @ 12:15am
- General condition: good
- Front sealing disc diameter: 2 measurements: 11.02-inch and 11.02-inch --> wear 0.48-inch (12.1mm)
- Rear sealing disc diameter: 2 measurements: 10.94-inch and 10.98-inch --> wear 0.54-inch (13.6mm)
- Front & rear guide disc diameter: 10.28-inch --> wear 0.12-inch (3.0mm)

SAIBOS CML	WEATHERFORD	CEPT
Signature: [signature]	Signature [signature]	Signature: H.G. Jones
Name: P. Cerruti	Name: D. LEDOUX	Name: H.Jones
Date: 25/08/02	Date: 8/25/02	Date: 8/25/02
Contractor Rep	Subcontractor party chief	Company Rep

Construction and Maritime Services BV	SITE MEMO CANYON STATION PLATFORM	No : 001 Date : August 22,2002
Client : CEPT	Project : FDS - Canyon Express Project	Ref : CS/CE/SM/001
Loc : Gulf of Mexico	Activity Phase : Final cleaning/ gauging of flowlines	
	Subject : CEPT acceptance of final cleaning/ gauging of flowlines	

Pig no.4 (bi-di gauge pig):
- Arrival time at Canyon Station: August 22nd, 02 @ 12:55am
- General condition: good
- Front sealing disc diameter: 2 measurements: 11.06-inch and 11.06-inch --> wear 0.44-inch (11.1mm)
- *Rear sealing disc diameter: 2 measurements: 10.87-inch and 10.91-inch --> wear 0.61-inch (15.6mm)*
- Front guide disc diameter: 10.31-inch --> wear 0.09-inch (2.3mm)
- Rear guide disc diameter: 10.28-inch --> wear 0.12-inch (3.0mm)
- **Gauge plate: good conditions - No signs of damages to the flowlines/ risers are reported.**

Low abrasion on the circumference: diameter measurement no.1: 9.49-inch (241mm) ; diameter measurement no.2: 9.49-inch (241mm) ; diameter maesurement no.3: 9.47-inch (240.5mm) ; diameter measurement no.4: 9.49-inch (241mm)

1 gallon of debris has been found in front of pig no.1.
Small amount of debris has been found in front of pigs no. 2, 3 and 4.
(Note: 1 feet of debris had previously been removed from the first pigging run completed on August 19th, 02)

Company has witnessed the removal of all pigs from the receiver. Company is satisfied that the flowlines and risers are undamaged and satisfactory cleaned. Contractor will proceed with hydrotesting asap.

SAIBOS CML	WEATHERFORD	CEPT
Signature: [signature]	Signature [signature]	Signature: H.G. Jones
Name: P. Cerruti	Name: D Ledoux	Name: H.Jones
Date: 25/08/02	Date: 8/25/02	Date: 8/25/02
Contractor Rep	Subcontractor party chief	Company Rep

APPENDIX A: HYDROSTATIC TEST RECORD AND CERTIFICATE

Report No: 01 Date: 08/26/02

Company: CEPT
Flowline/Riser: EAST/WEST FLOWLINES - FDS CANYON STATION PROJECT
Testing Contractor: WEATHERFORD
Construction Contractor: SAIPEM SAIBOS
Testing Specification: API 1110

Test Limits/Type of Construction

Flowline/Riser System Test Limits: EAST/WEST FLOWLINES - RISER - HP 261 JP -
New Construction: YES Repair: NA

Pipe Design Data

Spec & Grade	Weld Joint Factor	OD	Wt	SMYS	Design Pressure
API 5L - X65		12.75"	1.125" 0.900" 0.855" 0.800"	8157 psi FOR X65	5943 psi AT EL. +0 ft.

Medium Data

Type and Source of Test Medium: SEA WATER
Additive(s) (Mfg. and Product Name):

Dye: TADCO - TRACER FLURO XL 500 - LIQUID -		Quantity:	74 GLS	Dosage:	25 PPM
Film Forming Inhibitor:	NA	Quantity:	NA	Dosage:	NA
Oxygen Scavenger:	NA	Quantity:	NA	Dosage:	NA
Biocide:	NA	Quantity:	NA	Dosage:	NA

Pressure Test Data Summary

Test Pressure 7492 psi Min. 7488 psi %SMYS 91.80 Max 7492 psi - 91.85 %SMYS

Elevations Low Point NA High Point +52 ft DWT +52 ft Pump +52 ft

Began Test Date 08/25/02 ÷ 08/26/02 Time 05.23 pm ÷ 01.23 am -
Location of Measurement Point for Test Data HP 261 JP

Testing and Recording Witnessed By PIETRO CERUTI Date 08/26/02

Company Representative H.G. JONES Title

Testing Pressures: Max. 7492 psi for % SMYS 91.85
Min. 7488 psi for % SMYS 91.80
Qualified to Operate at for % SMYS

Report Check By P. CERUTI - SAIBOS Date 08/26/02

Approved By H.G. Jones Title TFE Representative

Company TFE

SB Construction and Maritime Services BV	SITE MEMO CANYON STATION PLATFORM	Page : 1 of 2 P.2/11 No : 001 Date : August 22,2002
Client : CEPT	Project : FDS - Canyon Express Project	Ref : CS/CE/SM/001
Loc : Gulf of Mexico	Activity Phase : Final cleaning/ gauging of flowlines	
	Subject : CEPT acceptance of final cleaning/ gauging of flowlines	

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- Arrival time at Canyon Station: August 22nd, 02 @ 11:38am
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- Front sealing disc diameter: 2 measurements: 11.02-inch and 11.02-inch --> wear 0.48-inch (12.1mm)
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SAIBOS CML	WEATHERFORD	CEPT
Signature: [signature]	Signature [signature]	Signature: H. G. Jones
Name: P. Cerruti	Name: D. LEDOUX	Name: H.Jones
Date: 25/08/02	Date: 8/25/02	Date: 8/25/02
Contractor Rep	Subcontractor party chief	Company Rep

Construction and Maritime Services BV	SITE MEMO CANYON STATION PLATFORM	No : 001 Date : August 22,2002
Client : CEPT	Project : FDS - Canyon Express Project	Ref : CS/CE/SM/001
Loc : Gulf of Mexico	Activity Phase : Final cleaning/ gauging of flowlines	
	Subject : CEPT acceptance of final cleaning/ gauging of flowlines	

Pig no.4 (bi-di gauge pig):
- Arrival time at Canyon Station: August 22nd, 02 @ 12:55am
- General condition: good
- Front sealing disc diameter: 2 measurements: 11.06-inch and 11.06-inch --> wear 0.44-inch (11.1mm)
- Rear sealing disc diameter: 2 measurements: 10.87-inch and 10.91-inch --> wear 0.61-inch (15.6mm)
- Front guide disc diameter: 10.31-inch --> wear 0.09-inch (2.3mm)
- Rear guide disc diameter: 10.28-inch --> wear 0.12-inch (3.0mm)
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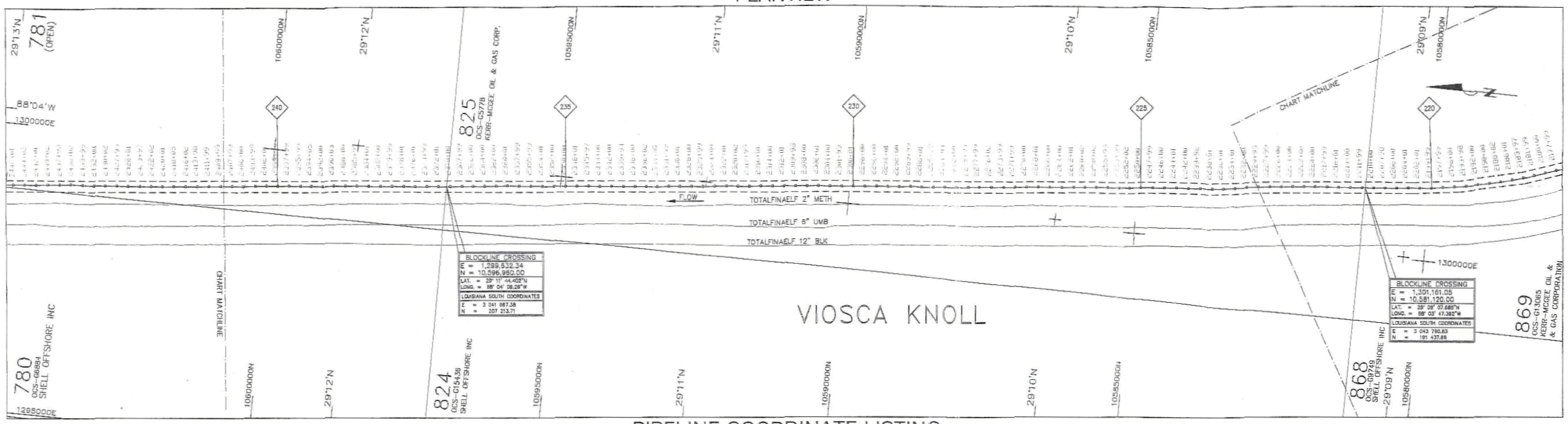
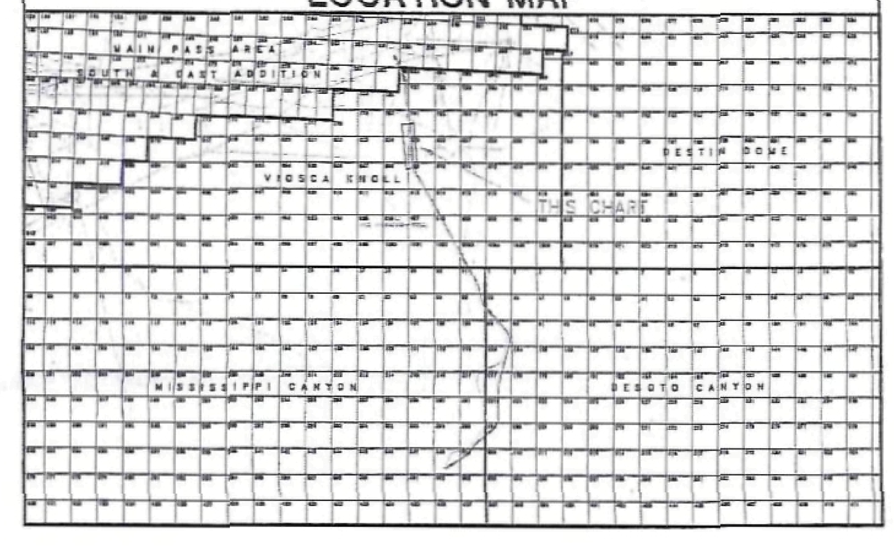
Name: P. Cerruti	Name: D Ledoux	Name: H.Jones
Date: 25/08/02	Date: 8/25/02	Date: 8/25/02
Contractor Rep	Subcontractor party chief	Company Rep

PLANVIEW



LOCATION MAP

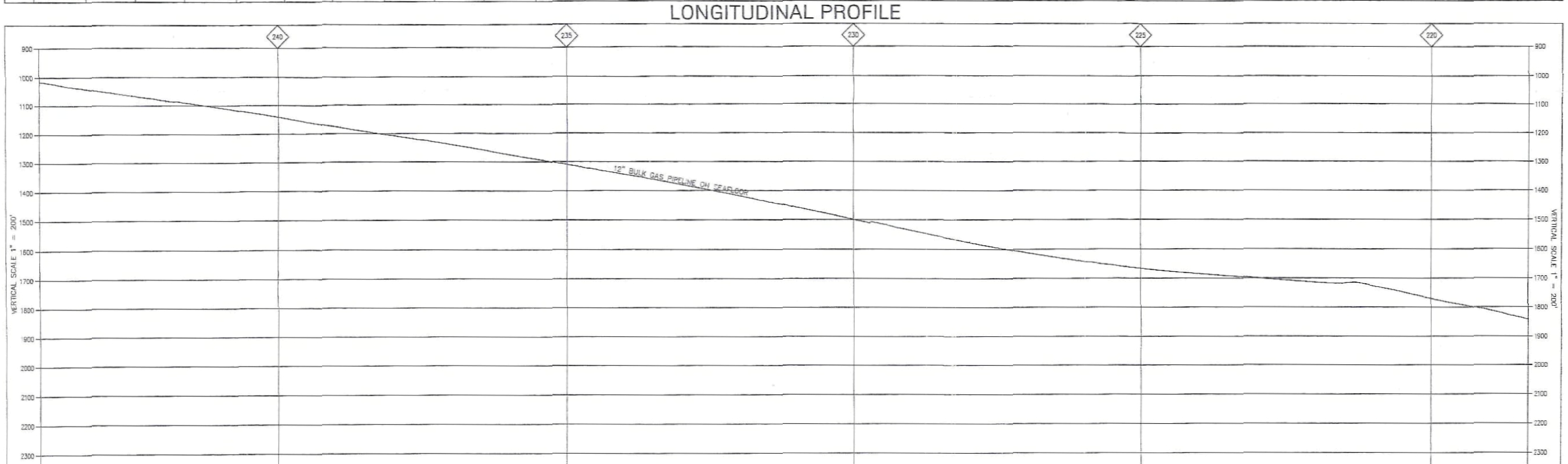


PIPELINE COORDINATE LISTING

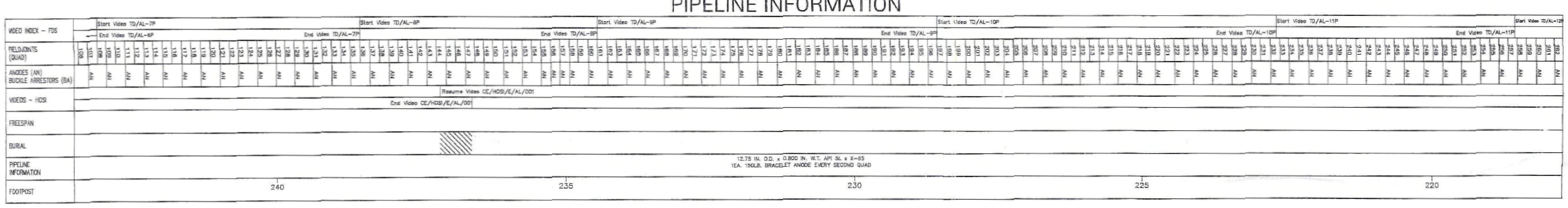
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
2177+99	1301804.52	10577848.52	2216+01	1301121.43	10581573.46	2253+99	1300755.77	10585353.77	2292+00	1300384.49	10589136.57
2180+00	1301737.70	10578037.96	2217+99	1301106.80	10581771.07	2255+99	1300740.75	10585552.45	2294+01	1300368.79	10589337.19
2181+99	1301671.91	10578225.49	2220+00	1301092.40	10581971.63	2258+02	1300720.21	10585754.88	2296+00	1300353.26	10589535.04
2183+97	1301612.93	10578414.18	2222+00	1301075.06	10582169.99	2260+02	1300697.95	10585953.61	2298+00	1300331.03	10589734.06
2186+01	1301557.87	10578610.20	2224+00	1301056.90	10582369.54	2262+01	1300676.50	10586151.73	2300+01	1300312.06	10589933.93
2188+02	1301503.84	10578804.36	2226+00	1301035.61	10582568.72	2264+00	1300654.77	10586349.84	2301+99	1300290.98	10590130.94
2190+00	1301455.07	10578996.23	2227+99	1301017.26	10582766.85	2266+00	1300640.58	10586548.47	2304+00	1300272.84	10590330.70
2192+00	1301414.14	10579192.07	2229+93	1300995.39	10582959.35	2268+01	1300625.47	10586749.39	2306+01	1300262.03	10590531.59
2193+98	1301371.92	10579385.65	2232+00	1300975.58	10583165.41	2270+00	1300606.27	10586947.40	2308+00	1300239.06	10590730.16
2196+00	1301337.55	10579584.43	2234+01	1300954.75	10583365.57	2271+99	1300585.70	10587145.36	2309+98	1300219.45	10590926.53
2197+99	1301307.24	10579781.39	2236+01	1300928.35	10583564.24	2273+99	1300565.35	10587344.86	2312+01	1300205.00	10591129.01
2199+99	1301271.04	10579977.54	2238+01	1300911.68	10583762.93	2276+02	1300543.42	10587546.17	2314+00	1300185.30	10591327.13
2202+01	1301251.63	10580178.67	2239+98	1300892.14	10583959.33	2277+99	1300525.18	10587742.71	2316+01	1300167.56	10591527.77
2204+01	1301234.46	10580378.51	2242+00	1300867.95	10584159.82	2279+94	1300504.26	10587936.37	2317+99	1300141.56	10591724.25
2206+00	1301209.64	10580575.62	2244+01	1300852.64	10584359.77	2282+00	1300481.87	10588140.65	2320+02	1300120.75	10591925.56
2207+98	1301190.52	10580773.46	2246+00	1300831.56	10584557.97	2284+04	1300463.56	10588343.94	2322+01	1300105.49	10592124.69
2210+00	1301169.76	10580974.10	2247+99	1300810.95	10584756.03	2285+99	1300440.30	10588538.28	2324+00	1300086.03	10592322.58
2211+99	1301155.91	10581172.43	2250+00	1300795.27	10584956.27	2288+01	1300420.78	10588738.15	2325+99	1300081.98	10592519.84
2214+00	1301137.93	10581373.15	2252+02	1300774.05	10585157.31	2289+99	1300413.12	10588937.37	2328+00	1300045.62	10592720.40

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
2330+01	1300024.57	10592920.85	2367+99	1299661.11	10596700.32	2406+00	1299294.62	10600484.29	2444+02	1298949.78	10604270.15						
2331+99	1300009.31	10593117.70	2370+00	1299637.96	10596900.37	2407+99	1299279.29	10600682.79	2446+01	1298930.70	10604468.28						
2334+00	1299981.53	10593317.37	2372+01	1299620.82	10597100.77	2409+99	1299259.33	10600881.31									
2336+02	1299965.44	10593517.81	2373+99	1299602.02	10597297.72	2411+99	1299237.41	10601080.61									
2338+00	1299945.96	10593715.15	2376+01	1299578.87	10597498.66	2413+98	1299215.66	10601278.11									
2339+94	1299925.99	10593908.48	2378+01	1299563.01	10597698.35	2416+02	1299198.75	10601481.79									
2342+00	1299910.10	10594113.35	2379+99	1299543.94	10597895.20	2418+05	1299180.45	10601683.91									
2344+00	1299886.51	10594311.97	2382+00	1299523.25	10598094.52	2420+01	1299158.47	10601878.14									
2345+97	1299874.68	10594509.53	2384+01	1299503.04	10598295.16	2422+02	1299142.91	10602078.46									
2348+01	1299852.86	10594711.55	2385+99	1299488.21	10598492.48	2423+97	1299124.13	10602272.78									
2350+00	1299834.78	10594909.74	2388+00	1299467.94	10598692.49	2426+01	1299105.40	10602478.04									
2352+00	1299818.06	10595109.34	2390+03	1299451.81	10598894.44	2427+99	1299091.74	10602673.54									
2354+01	1299799.25	10595309.26	2392+00	1299431.44	10599090.39	2430+02	1299073.52	10602875.62									
2355+99	1299784.19	10595507.23	2394+05	1299416.98	10599295.77	2432+00	1299057.68	10603073.71									
2357+99	1299757.27	10595706.27	2395+99	1299401.64	10599488.82	2433+99	1299044.91	10603271.91									
2360+01	1299752.81	10595908.09	2397+99	1299384.87	10599687.84	2436+02	1299035.22	10603475.45									
2362+00	1299726.30	10596105.32	2399+99	1299360.95	10599886.84	2437+98	1299010.28	10603669.30									
2364+00	1299704.69	10596304.47	2402+01	1299343.29	10600087.96	2440+02	1298991.04	10603873.02									
2366+00	1299683.50	10596502.88	2403+99	1299319.97	10600285.05	2442+01	1298967.12	10604069.87									

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

	PLANVIEW		LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	————	MEAN SEABED (FSW)
- - - - -	CORRIDOR +/- 100 FEET		
————	BLOCK BOUNDARY		PIPELINE INFORMATION
45	BLOCK NUMBER		FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR		HOSI = VIDEOS FROM HOS INNOVATOR
————	BLOCK AREA BOUNDARY		
998+79	STATION		

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum	: NAD27
Spheroid	: Clarke 1866
Projection	: UTM Zone 16N in US Survey Feet
Central Meridian	: 87deg West
False Easting	: 1640416.667
False Northing	: 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA inc.

Saipem Inc.

SaiBOS
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT

EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY
MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE
SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.
CHART 11 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

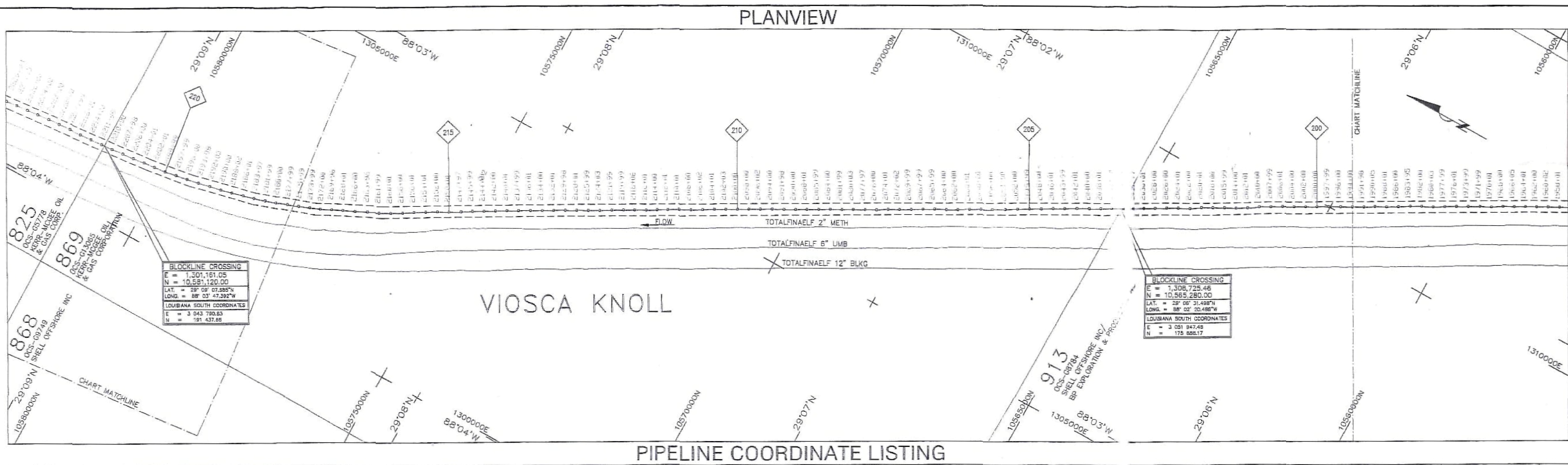
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

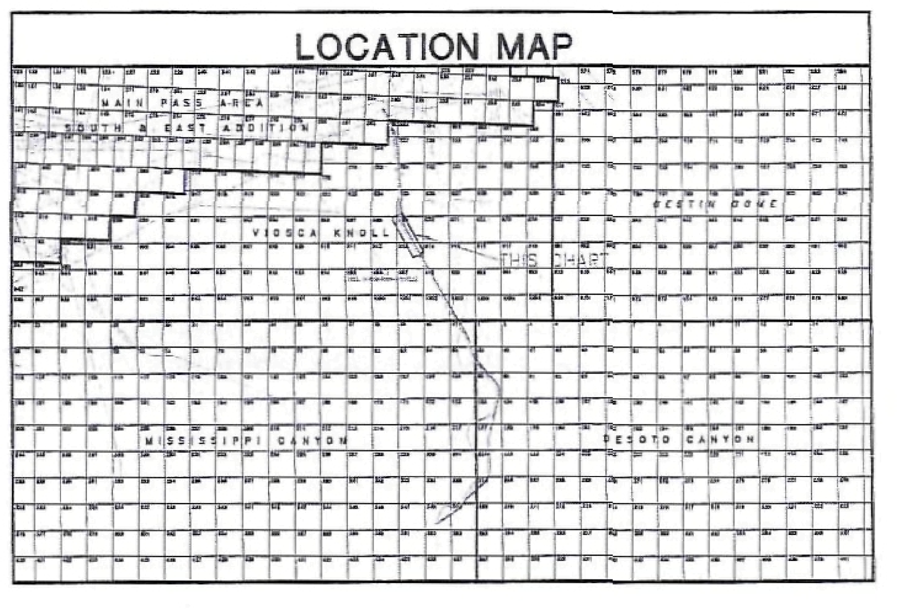
Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-11

PLANVIEW



LOCATION MAP

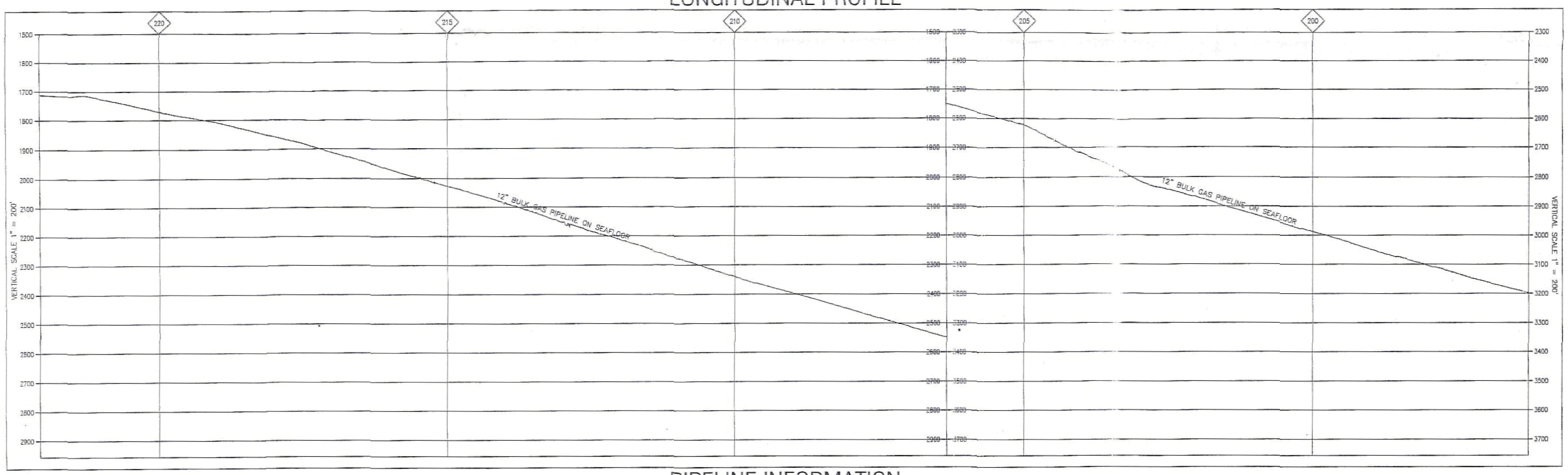


PIPELINE COORDINATE LISTING

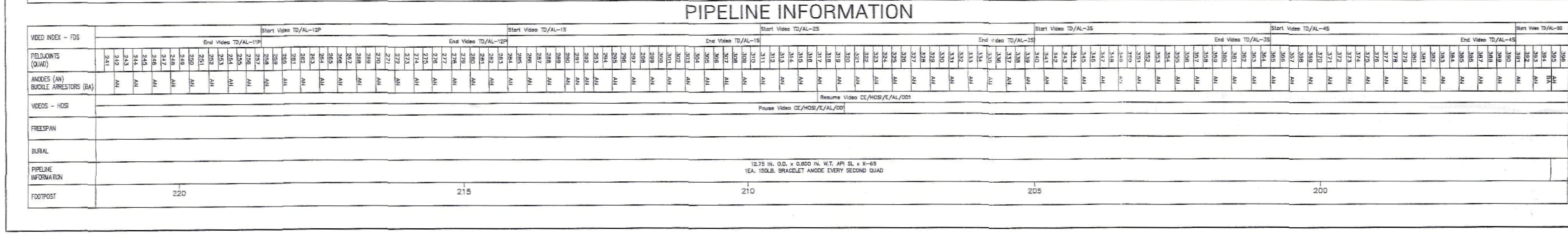
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1958+01	1312455.62	10558610.34	1996+00	1310611.05	10561931.72	2034+02	1308745.83	10565244.17	2072+02	1306861.55	10568543.96
1960+02	1312359.87	10558786.65	1997+99	1310514.55	10562105.78	2036+09	1308645.80	10565425.31	2074+01	1306768.82	10568720.08
1962+00	1312260.25	10558958.30	2000+00	1310419.20	10562282.31	2038+01	1308551.39	10565592.46	2076+00	1306664.60	10568890.44
1964+01	1312166.44	10559135.69	2002+00	1310323.19	10562457.80	2040+00	1308448.74	10565762.98	2077+97	1306572.44	10569064.22
1966+05	1312066.63	10559313.61	2004+00	1310225.62	10562632.47	2042+01	1308350.69	10565938.43	2080+03	1306473.04	10569245.20
1968+00	1311975.74	10559486.63	2006+01	1310126.83	10562807.81	2043+99	1308249.87	10566109.26	2081+99	1306378.62	10569416.21
1970+01	1311868.48	10559656.55	2007+99	1310027.75	10562978.24	2046+01	1308152.98	10566286.36	2084+00	1306284.26	10569593.51
1971+99	1311782.46	10559835.24	2010+00	1309933.94	10563156.63	2048+00	1308048.85	10566456.07	2085+99	1306185.77	10569767.34
1973+99	1311684.07	10560009.39	2012+01	1309824.67	10563325.75	2049+99	1307952.61	10566630.52	2088+01	1306087.00	10569943.19
1976+01	1311587.06	10560186.65	2014+00	1309726.01	10563498.88	2052+00	1307851.58	10566804.14	2090+00	1305988.92	10570116.14
1977+99	1311487.62	10560358.20	2015+99	1309637.96	10563677.41	2054+00	1307747.98	10566975.35	2091+98	1305893.47	10570290.00
1980+03	1311384.44	10560533.52	2018+00	1309541.53	10563854.29	2056+00	1307651.46	10567149.91	2094+00	1305799.99	10570468.49
1982+00	1311297.57	10560711.51	2020+01	1309447.77	10564031.40	2058+00	1307550.69	10567322.90	2096+02	1305699.87	10570644.68
1983+95	1311202.98	10560882.01	2022+00	1309334.50	10564196.56	2060+01	1307452.24	10567498.36	2098+00	1305604.60	10570818.30
1986+00	1311096.81	10561057.53	2024+01	1309240.83	10564374.14	2062+00	1307351.61	10567670.54	2100+00	1305505.20	10570991.00
1988+01	1310996.91	10561231.78	2026+00	1309141.21	10564546.92	2064+00	1307253.57	10567844.60	2102+03	1305406.36	10571168.93
1990+05	1310904.00	10561413.05	2028+00	1309043.16	10564720.56	2065+99	1307164.18	10568022.67	2104+01	1305311.00	10571342.72
1991+98	1310803.59	10561578.53	2030+01	1308944.87	10564896.29	2067+99	1307063.49	10568195.17	2106+02	1305209.43	10571515.61
1994+00	1310707.12	10561756.06	2031+99	1308845.59	10565067.46	2069+99	1306964.00	10568369.31	2108+00	1305111.37	10571687.32

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
2110+01	1305014.97	10571864.78	2147+97	1303140.15	10575165.00	2186+01	1301557.87	10578610.20	[illegible]	1301056.90	10582369.54						
2112+01	1304914.66	10572036.99	2150+01	1303039.65	10575342.53	2188+02	1301503.84	10578804.36	[illegible]	1301035.61	10582568.72						
2114+00	1304815.82	10572209.50	2152+00	1302947.96	10575519.06	2190+00	1301455.07	10578996.23	[illegible]	1301017.26	10582766.85						
2116+01	1304713.59	10572383.59	2154+01	1302848.05	10575693.40	2192+00	1301414.14	10579192.07	[illegible]	1300995.39	10582959.35						
2118+06	1304614.41	10572562.19	2156+01	1302748.53	10575867.26	2193+98	1301371.92	10579385.65									
2119+99	1304518.97	10572730.89	2158+00	1302644.93	10576037.06	2196+00	1301337.55	10579584.43									
2121+99	1304420.35	10572904.78	2160+01	1302544.24	10576210.91	2197+99	1301307.24	10579781.39									
2124+03	1304316.14	10573080.79	2161+99	1302449.70	10576385.74	2199+99	1301271.04	10579977.54									
2125+99	1304221.73	10573252.09	2163+96	1302364.01	10576563.37	2202+01	1301251.63	10580178.67									
2128+01	1304126.14	10573429.98	2166+00	1302273.13	10576745.93	2204+01	1301234.46	10580378.51									
2129+98	1304031.17	10573602.49	2168+01	1302191.16	10576929.82	2206+00	1301209.64	10580575.62									
2132+01	1303932.37	10573779.18	2169+96	1302109.66	10577106.36	2207+98	1301190.52	10580773.46									
2134+00	1303835.35	10573953.70	2172+00	1302023.76	10577291.15	2210+00	1301169.76	10580974.10									
2136+01	1303737.00	10574128.12	2173+99	1301952.07	10577476.51	2211+99	1301155.91	10581172.43									
2137+99	1303639.04	10574300.86	2175+99	1301875.47	10577661.41	2214+00	1301137.93	10581373.15									
2140+01	1303541.38	10574476.91	2177+99	1301804.52	10577848.52	2216+01	1301121.43	10581573.46									
2142+00	1303441.92	10574649.52	2180+00	1301737.70	10578037.96	2217+99	1301108.80	10581771.07									
2144+01	1303340.71	10574823.86	2181+99	1301671.91	10578225.49	2220+00	1301092.40	10581971.63									
2145+99	1303244.72	10574996.94	2183+97	1301612.93	10578414.18	2222+00	1301075.06	10582169.99									

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA
Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek
Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = -151.0 meters
dz = -175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express

Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.

Sai
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 10 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162

THALES

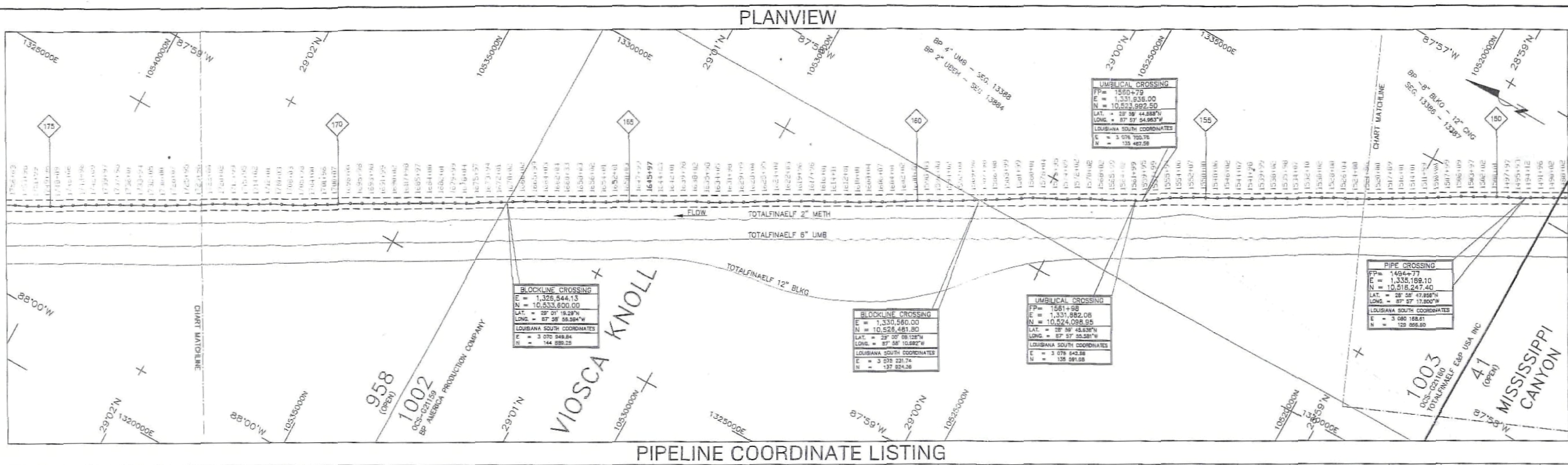
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

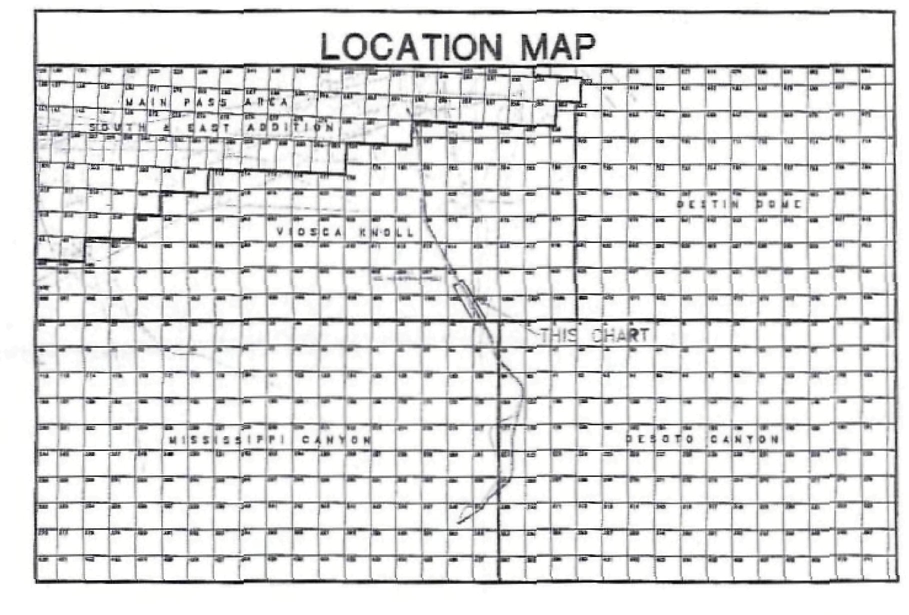
Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-10

PLANVIEW



LOCATION MAP

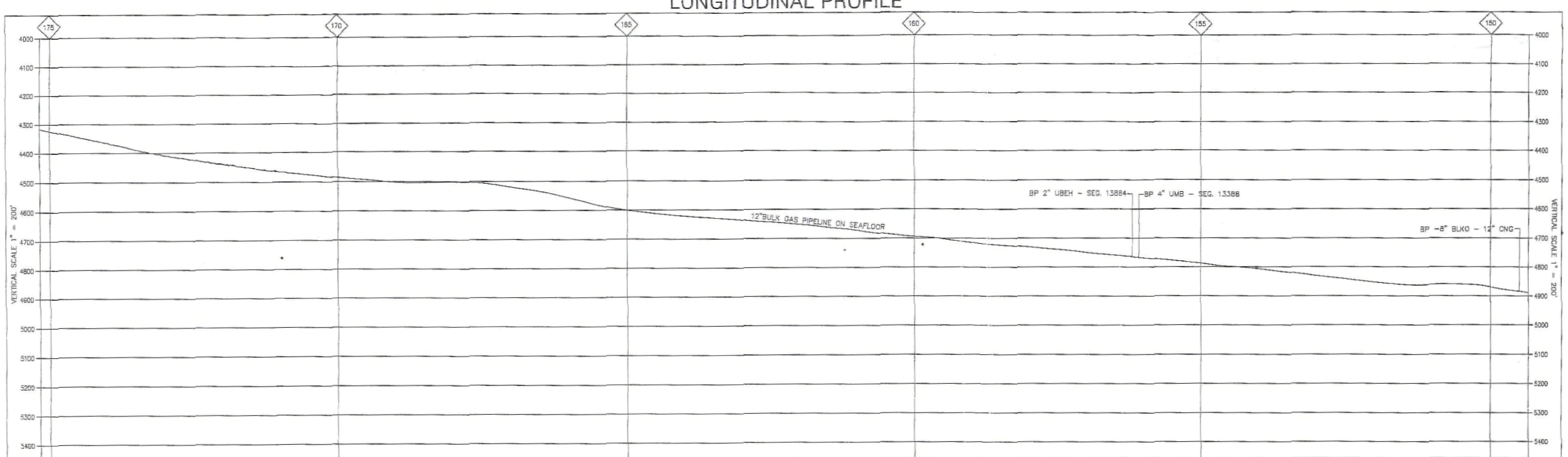


PIPELINE COORDINATE LISTING

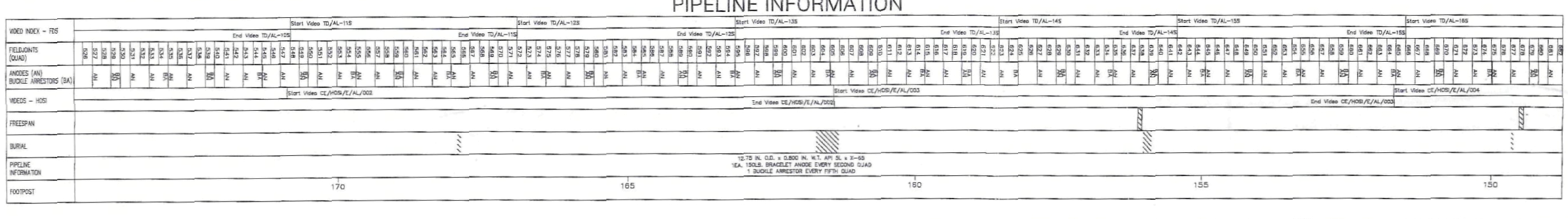
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1488+02	1335524.80	10517661.66	1526+04	1333655.39	10520972.63	1564+02	1331783.67	10524277.56	1602+02	1329908.87	10527583.48
1490+02	1335425.42	10517835.42	1528+00	1333569.58	10521149.04	1565+99	1331687.56	10524449.68	1604+01	1329804.39	10527752.27
1491+96	1335332.54	10518006.07	1530+02	1333469.62	10521324.86	1568+02	1331595.16	10524630.22	1606+07	1329703.38	10527931.67
1494+12	1335223.04	10518192.26	1532+10	1333368.67	10521506.50	1570+02	1331509.23	10524811.55	1608+04	1329609.52	10528105.76
1495+93	1335130.92	10518348.06	1534+07	1333267.76	10521676.26	1572+02	1331412.02	10524986.16	1610+01	1329504.61	10528272.22
1497+97	1335038.38	10518530.08	1535+98	1333175.30	10521843.66	1574+09	1331300.86	10525161.16	1612+01	1329412.36	10528449.58
1500+01	1334946.88	10518713.04	1538+02	1333079.09	10522023.07	1575+95	1331217.38	10525328.31	1614+11	1329305.40	10528630.21
1502+02	1334849.90	10518888.39	1539+99	1332982.56	10522194.39	1578+04	1331123.01	10525514.47	1616+01	1329216.88	10528799.22
1503+97	1334752.86	10519058.04	1541+98	1332883.45	10522367.45	1580+01	1331030.62	10525688.19	1617+98	1329131.45	10528977.35
1506+09	1334654.12	10519245.98	1544+07	1332785.78	10522552.10	1581+99	1330932.62	10525860.86	1619+96	1329030.96	10529147.97
1507+99	1334554.46	10519407.46	1546+02	1332700.14	10522727.77	1583+99	1330825.57	10526029.77	1622+03	1328933.79	10529330.22
1510+00	1334449.51	10519579.31	1548+06	1332598.43	10522904.17	1586+08	1330715.06	10526208.14	1624+00	1328838.88	10529502.78
1511+99	1334353.78	10519754.15	1550+00	1332503.73	10523074.65	1587+98	1330619.06	10526371.08	1625+95	1328734.84	10529668.46
1514+01	1334249.02	10519926.43	1552+07	1332401.77	10523254.16	1589+98	1330523.45	10526547.09	1628+00	1328631.03	10529844.79
1516+01	1334149.94	10520100.27	1554+06	1332296.98	10523424.51	1592+00	1330413.21	10526717.54	1629+99	1328533.91	10530019.19
1517+89	1334055.09	10520262.93	1555+94	1332202.93	10523585.88	1594+02	1330308.13	10526890.12	1631+98	1328436.84	10530194.09
1520+00	1333949.21	10520444.68	1557+99	1332094.09	10523760.30	1596+08	1330206.28	10527068.23	1634+05	1328336.40	10530373.66
1521+96	1333850.21	10520614.85	1559+95	1331981.79	10523922.26	1598+03	1330112.05	10527239.68	1635+98	1328244.95	10530543.34
1524+00	1333752.32	10520793.58	1561+99	1331881.84	10524099.47	1600+00	1330017.82	10527412.36	1638+02	1328155.35	10530727.02

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1639+98	1328059.81	10530898.68	1678+04	1326190.59	10534213.37	1715+95	1324340.65	10537523.06	1753+98	1322463.70	10540830.07
1642+01	1327960.54	10531075.46	1679+89	1326099.66	10534386.15	1717+99	1324243.38	10537701.42	1755+03	1322376.96	10541016.03
1644+03	1327860.24	10531250.47	1682+01	1326002.38	10534562.78	1720+02	1324147.27	10537880.34			
1645+97	1327768.55	10531421.20	1684+00	1325904.26	10534736.63	1722+00	1324049.66	10538052.99			
1647+99	1327673.39	10531599.42	1685+97	1325807.76	10534907.69	1723+96	1323947.76	10538220.71			
1650+03	1327572.66	10531776.88	1687+98	1325708.40	10535082.30	1725+95	1323858.80	10538399.27			
1652+01	1327470.53	10531947.26	1690+02	1325605.43	10535259.47	1728+07	1323748.22	10538579.53			
1654+01	1327371.80	10532121.01	1691+99	1325508.78	10535431.06	1730+00	1323647.16	10538744.81			
1656+02	1327275.77	10532297.22	1693+98	1325410.55	10535603.63	1732+05	1323544.32	10538921.80			
1658+03	1327175.94	10532471.57	1695+98	1325311.70	10535777.93	1733+94	1323455.20	10539088.61			
1660+33	1327062.67	10532672.04	1698+00	1325212.36	10535952.88	1736+01	1323358.54	10539271.18			
1662+04	1326980.47	10532822.34	1700+07	1325112.13	10536134.86	1737+98	1323263.39	10539444.65			
1664+03	1326884.39	10532996.71	1701+98	1325019.27	10536299.56	1739+97	1323171.33	10539620.53			
1665+99	1326789.67	10533168.47	1704+00	1324915.61	10536475.40	1742+09	1323062.19	10539802.81			
1668+02	1326696.17	10533347.88	1705+98	1324816.11	10536646.29	1743+96	1322971.41	10539966.27			
1670+02	1326592.53	10533519.80	1708+03	1324721.84	10536827.77	1746+06	1322859.39	10540144.32			
1672+01	1326490.00	10533689.64	1710+03	1324630.04	10537005.92	1748+09	1322754.59	10540317.53			
1673+94	1326392.78	10533857.24	1712+01	1324539.41	10537182.36	1749+96	1322660.97	10540480.48			
1675+97	1326292.79	10534033.99	1714+02	1324443.35	10537359.08	1751+99	1322560.38	10540656.49			

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE	
110	DESIGN ROUTE FOOTPOST		MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET		
	BLOCK BOUNDARY	PIPELINE INFORMATION	
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS	
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR	
	BLOCK AREA BOUNDARY		
998+79	STATION		

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum	: NAD27
Spheroid	: Clarke 1866
Projection	: UTM Zone 16N in US Survey Feet
Central Meridian	: 87deg West
False Easting	: 1640416.667
False Northing	: 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Saipem Inc. Saibos CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT

EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 08 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

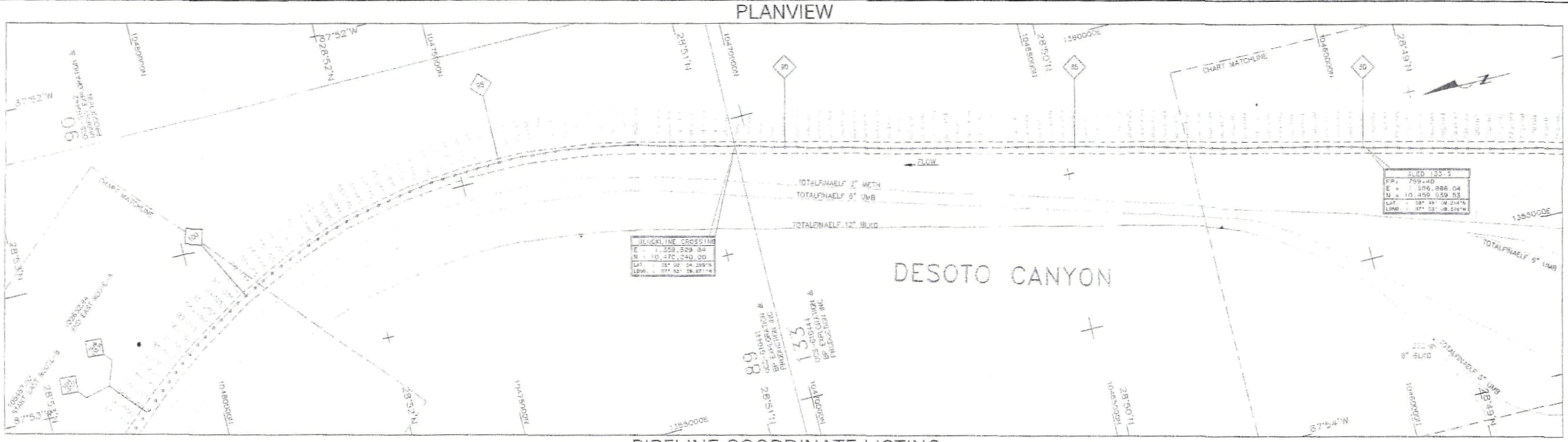
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-08

PLANVIEW

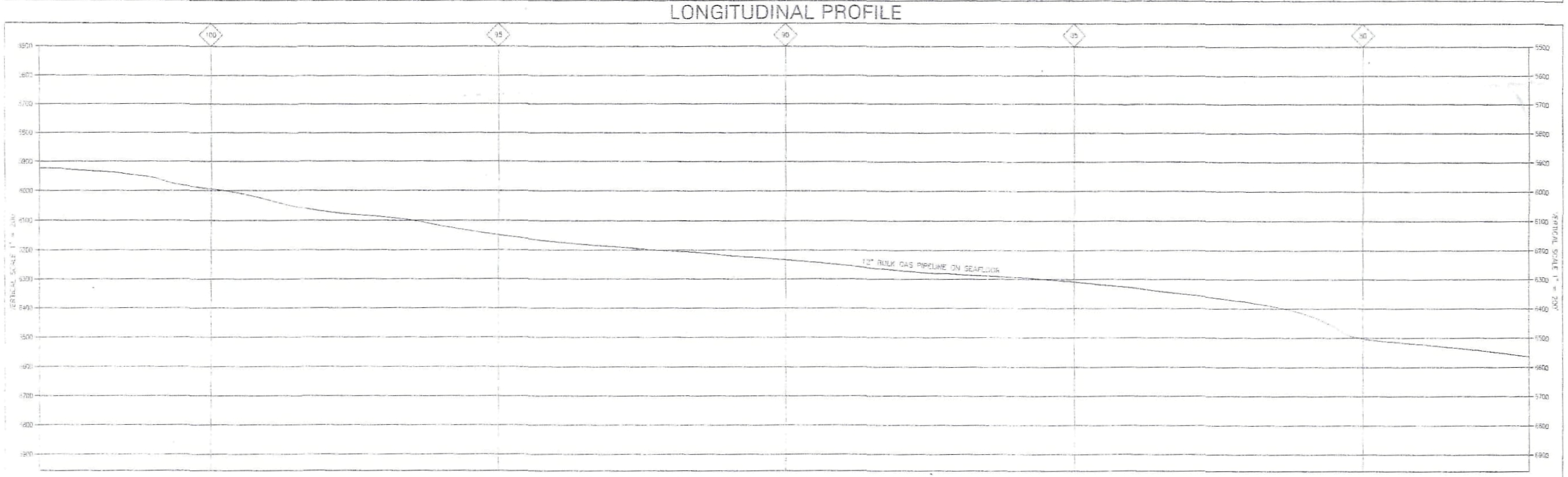


PIPELINE COORDINATE LISTING

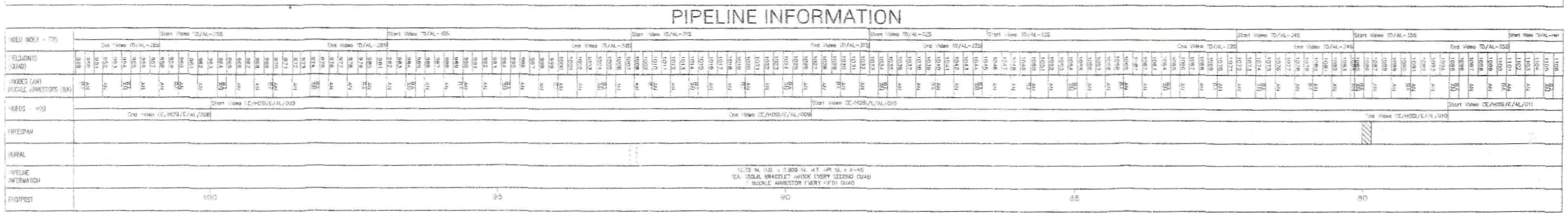
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
766+06	1356085.76	10456403.70	804+08	1357014.89	10460091.34	841+99	1357915.84	10463772.01	880+22	1358811.90	10467488.28
768+07	1356136.89	10456597.62	805+97	1357080.82	10460273.30	844+02	1357967.34	10463968.83	881+98	1358856.44	10467660.65
770+01	1356182.54	10456786.71	808+00	1357109.32	10460470.87	845+97	1358017.77	10464157.45	883+98	1358903.44	10467853.12
771+98	1356225.69	10456978.48	810+04	1357134.49	10460669.04	847+99	1358066.20	10464353.33	885+97	1358953.70	10468046.09
773+99	1356267.27	10457175.56	812+01	1357194.35	10460862.23	850+03	1358113.01	10464551.42	887+99	1359004.13	10468242.23
775+97	1356310.74	10457368.66	814+02	1357240.25	10461058.47	852+04	1358159.55	10464747.14	889+96	1359053.85	10468434.37
778+07	1356361.65	10457572.28	816+00	1357286.81	10461250.65	854+00	1358205.66	10464937.63	892+03	1359101.56	10468634.48
780+07	1356410.23	10457766.55	817+99	1357331.56	10461444.26	855+97	1358251.55	10465129.67	893+98	1359145.16	10468824.46
781+99	1356456.75	10457952.57	820+04	1357378.38	10461644.20	858+02	1358302.39	10465326.70	896+02	1359193.76	10469022.32
783+99	1356505.22	10458146.42	822+05	1357425.19	10461839.72	860+04	1358347.21	10465525.20	897+98	1359255.15	10469210.32
786+04	1356555.09	10458345.89	823+97	1357471.64	10462026.43	862+05	1358389.35	10465721.50	900+00	1359304.01	10469404.60
788+03	1356603.14	10458538.04	826+00	1357521.39	10462223.26	863+97	1358431.07	10465908.76	901+89	1359347.34	10469598.72
790+04	1356652.19	10458733.83	827+96	1357565.87	10462413.27	866+01	1358477.86	10466107.68	903+99	1359408.03	10469789.78
792+07	1356703.25	10458929.65	830+00	1357615.39	10462611.70	867+94	1358523.55	10466295.82	906+01	1359465.04	10469984.53
793+95	1356753.05	10459111.03	832+01	1357668.61	10462806.29	869+98	1358571.88	10466493.28	908+02	1359517.32	10470178.01
796+03	1356807.75	10459312.41	834+04	1357719.10	10463001.98	872+01	1358619.25	10466691.09	910+01	1359556.57	10470374.01
798+08	1356851.85	10459512.20	836+03	1357769.41	10463194.85	873+98	1358664.99	10466882.29	912+02	1359607.68	10470568.39
800+05	1356906.49	10459702.11	837+93	1357817.00	10463378.57	876+08	1358713.72	10467086.51	913+99	1359658.85	10470758.36
801+99	1356960.54	10459888.53	840+05	1357869.18	10463563.81	878+07	1358760.13	10467280.44	916+01	1359706.65	10470954.98

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
918+08	1359753.89	10471156.28	955+98	1360221.86	10474904.14	993+97	1359351.72	10478578.22	1056+05	1357423.20	10481369.72						
920+00	1359802.08	10471342.24	957+98	1360213.55	10475104.70	996+02	1359246.64	10478766.35	1057+98	1357299.48	10481517.53						
922+03	1359853.23	10471538.60	959+97	1360196.89	10475303.27	997+93	1359152.76	10478937.80									
924+02	1359911.24	10471728.65	961+99	1360183.28	10475504.82	1000+03	1359035.91	10479124.54									
925+95	1359961.40	10471915.29	964+02	1360159.70	10475706.38	1001+94	1358975.99	10479293.00									
928+01	1360006.13	10472117.50	966+01	1360128.75	10475903.17	1003+87	1358879.36	10479460.66									
929+99	1360042.79	10472312.90	968+00	1360094.97	10476099.65	1005+09	1358766.27	10479651.77									
932+03	1360079.95	10472514.37	970+07	1360056.76	10476304.11	1007+99	1358667.61	10479814.76									
934+04	1360115.04	10472712.50	971+98	1360023.48	10476491.79	1010+08	1358554.94	10479991.87									
935+99	1360141.16	10472907.03	974+03	1359979.13	10476692.58	1011+95	1358449.19	10480146.65									
937+97	1360174.49	10473102.24	975+99	1359932.46	10476883.53	1014+05	1358322.21	10480315.07									
940+07	1360199.76	10473311.20	978+01	1359878.35	10477078.79	1016+08	1358163.30	10480471.86									
941+98	1360214.59	10473502.28	980+01	1359821.92	10477270.80	1018+03	1358046.42	10480620.26									
944+01	1360224.09	10473705.77	982+03	1359765.88	10477464.74	1020+01	1357976.53	10480770.02									
945+98	1360237.72	10473903.16	983+99	1359701.15	10477650.10	1021+88	1357813.15	10480910.49									
948+04	1360245.32	10474109.63	985+97	1359637.23	10477837.33	1024+05	1357668.92	10481073.17									
949+96	1360241.88	10474302.48	988+01	1359565.61	10478029.08	1025+99	1357544.29	10481221.27									
952+01	1360235.30	10474507.49	990+00	1359492.72	10478215.05	1026+46	1357513.42	10481259.42									
953+93	1360230.32	10474699.74	991+96	1359416.84	10478395.81	1054+68	1357509.70	10481264.01									

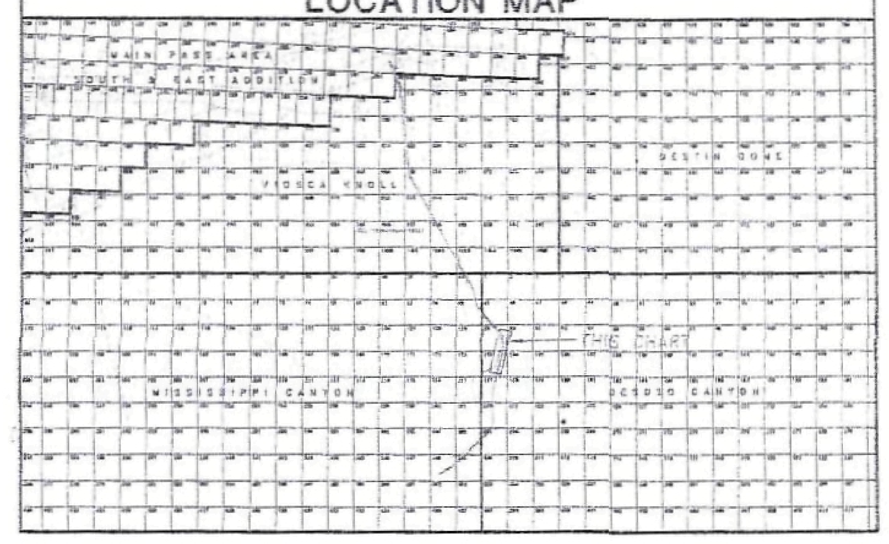
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

PLANVIEW — LONGITUDINAL PROFILE

- 110 — DESIGN ROUTE FOOTPOST
- CORRIDOR +/- 100 FEET
- BLOCK BOUNDARY
- 45 — BLOCK NUMBER
- OCS-G10441 BP EXPLORATION — BLOCK LEASE & OPERATOR
- BLOCK AREA BOUNDARY
- 998+79 — STATION
- MEAN SEABED (FSW)

PIPELINE INFORMATION

FDS = VIDEOS FROM SAIBOS FDS

HOSI = VIDEOS FROM HOS INNOVATOR

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS

Thales Skyfix, Micronet DGPS/MultiFix 2
SkyFix Stations: Houston (500), Tampa Bay (ID 520), New Orleans (540), Carmen (560)
Micronet Stations: Creek

Data Transformation WGS84 to NAD 27 with JECA Control:
dx = +7.0 meters
dy = -151.0 meters
dz = -175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT.

STATE OF LOUISIANA — DALE H. LIPPS REG. No. 0307 REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 — DATE

Canyon Express

Operated by TotalFinaElf E&P USA inc.

Eni — Saipem Inc. — SaiBOS CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT

EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 05 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162

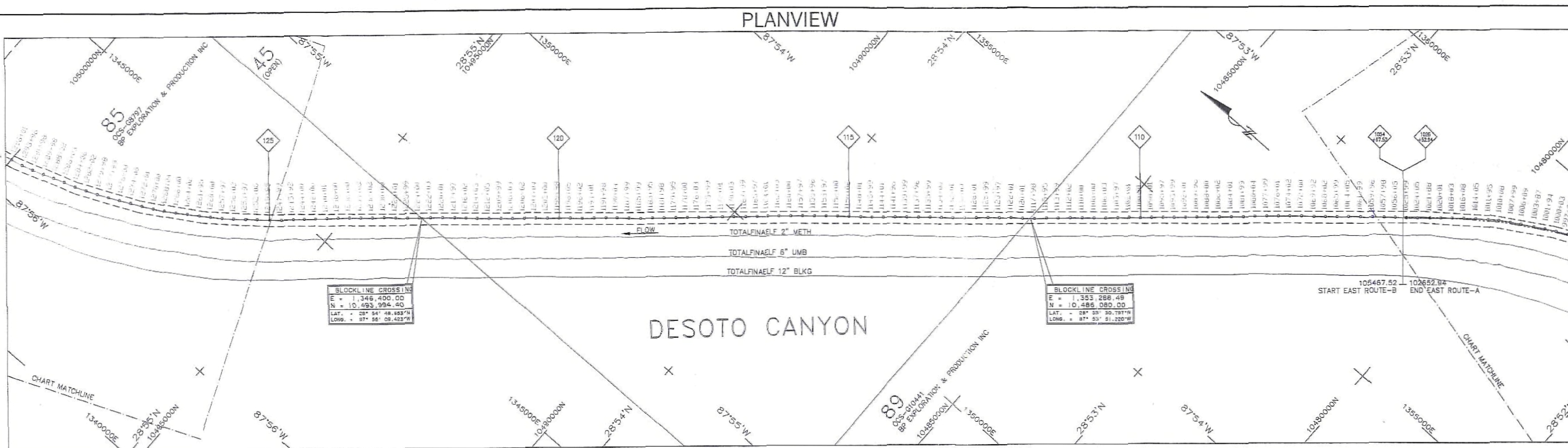
THALES

HORIZONTAL SCALE 1" : 1000'

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

Drawn By : C BOWEN	Date of Survey : JAN-NOV 2002
Checked By : K WILLIAMS	Date Drawn : NOV 2002
Approved By : D LIPPS	Racal Prj/DP No : 2769-0834/4535
	Racal Dwg No : EAST/4535/AL-05

PLANVIEW



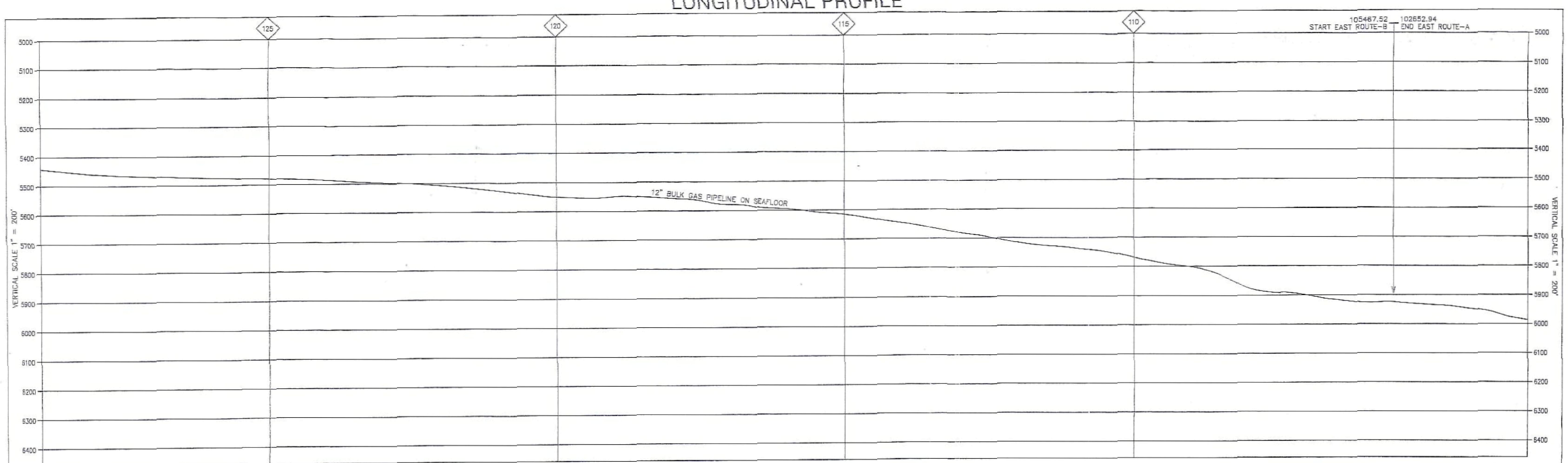
PIPELINE COORDINATE LISTING

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
997+93	1359162.76	10478937.80	1059+96	1357169.99	10481668.36	1098+01	1354661.22	10484529.43
1000+03	1359065.91	10479124.54	1061+99	1357040.51	10481824.90	1100+01	1354525.14	10484675.82
1001+94	1358975.99	10479293.00	1064+05	1356906.92	10481981.11	1102+01	1354394.27	10484826.77
1003+87	1358879.36	10479460.68	1065+99	1356776.47	10482124.92	1103+97	1354267.70	10484976.22
1006+09	1358766.27	10479651.77	1068+02	1356645.05	10482279.08	1106+03	1354127.28	10485127.27
1007+99	1358667.61	10479814.76	1069+92	1356522.00	10482424.98	1108+00	1353998.65	10485276.05
1010+08	1358554.94	10479991.87	1072+00	1356388.64	10482583.65	1110+00	1353866.57	10485426.85
1011+95	1358449.19	10480146.65	1074+02	1356255.84	10482736.44	1112+02	1353735.92	10485580.45
1014+05	1358322.21	10480315.07	1076+01	1356124.44	10482885.70	1113+99	1353603.21	10485726.24
1016+08	1358193.50	10480471.86	1077+99	1355993.06	10483034.37	1115+95	1353474.25	10485873.40
1018+03	1358066.42	10480620.26	1080+04	1355856.47	10483186.73	1117+98	1353336.26	10486023.46
1020+01	1357936.53	10480770.02	1081+99	1355728.30	10483333.55	1120+01	1353206.71	10486178.99
1021+88	1357813.15	10480910.49	1084+01	1355595.41	10483485.74	1122+01	1353082.24	10486335.85
1024+05	1357668.92	10481073.17	1086+02	1355460.00	10483634.92	1123+97	1352957.97	10486488.42
1025+99	1357544.29	10481221.27	1088+00	1355328.35	10483781.77	1125+99	1352826.52	10486640.68
1026+48	1357513.42	10481259.42	1089+96	1355198.75	10483929.55	1128+01	1352691.60	10486791.18
1054+68	1357509.70	10481264.01	1092+01	1355060.40	10484080.36	1130+04	1352554.93	10486942.47
1056+05	1357423.20	10481369.72	1093+99	1354926.90	10484226.99	1132+01	1352426.34	10487090.48
1057+98	1357299.48	10481517.53	1095+97	1354796.41	10484376.48	1134+00	1352298.38	10487242.96

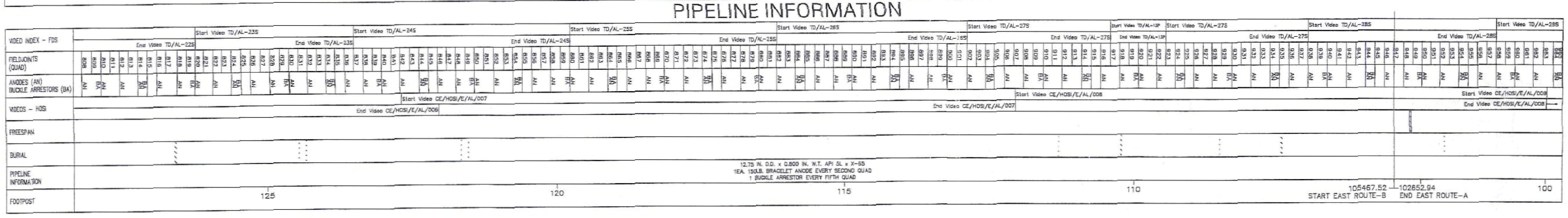
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1135+99	1352169.14	10487394.85	1173+99	1349663.58	10490251.25	1212+05	1347156.51	10493114.93
1137+96	1352037.89	10487542.20	1176+03	1349526.24	10490402.93	1214+03	1347024.89	10493263.15
1139+99	1351905.02	10487695.42	1178+00	1349394.70	10490550.03	1216+02	1346897.54	10493416.08
1141+96	1351773.83	10487842.84	1179+95	1349264.43	10490693.84	1217+97	1346773.10	10493566.15
1144+01	1351638.44	10487995.92	1181+98	1349128.76	10490846.12	1220+01	1346640.28	10493721.90
1145+99	1351507.41	10488144.99	1183+95	1348998.74	10490994.02	1222+03	1346506.84	10493872.98
1148+01	1351376.83	10488298.87	1185+99	1348865.28	10491148.41	1224+00	1346376.32	10494021.30
1150+06	1351245.93	10488456.19	1187+99	1348737.15	10491301.33	1225+99	1346244.76	10494170.26
1152+00	1351122.63	10488606.67	1190+04	1348605.86	10491459.34	1228+01	1346120.81	10494329.65
1153+97	1350994.00	10488755.84	1191+98	1348479.21	10491606.06	1230+00	1345996.83	10494485.93
1155+96	1350862.64	10488905.75	1194+01	1348342.57	10491756.64	1232+02	1345858.85	10494633.06
1157+97	1350731.92	10489057.45	1196+02	1348206.22	10491903.77	1234+02	1345726.76	10494783.44
1160+00	1350596.61	10489209.01	1198+05	1348077.11	10492060.11	1236+00	1345596.23	10494933.14
1162+03	1350462.62	10489361.43	1199+98	1347949.82	10492206.24	1238+00	1345462.77	10495081.13
1164+01	1350330.82	10489509.27	1202+00	1347814.31	10492355.95	1240+01	1345325.52	10495229.06
1165+97	1350202.11	10489656.78	1204+04	1347682.03	10492510.46	1242+06	1345185.38	10495378.16
1167+99	1350065.08	10489805.33	1206+02	1347551.75	10492659.70	1244+00	1345054.92	10495521.96
1170+03	1349929.00	10489957.41	1208+03	1347418.57	10492811.09	1245+92	1344924.98	10495663.30
1172+01	1349795.85	10490104.43	1209+99	1347290.65	10492958.97	1247+99	1344786.29	10495816.60

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1249+95	1344660.19	10495967.64	1288+02	1342753.45	10499229.30									
1252+06	1344525.45	10496128.63	1289+98	1342688.21	10499413.63									
1253+97	1344406.73	10496278.07	1291+98	1342628.79	10499604.49									
1256+02	1344277.45	10496436.56	1293+96	1342570.56	10499793.70									
1257+97	1344157.78	10496590.40	1296+01	1342521.35	10499992.39									
1260+00	1344040.66	10496756.13												
1261+95	1343929.17	10496915.61												
1264+02	1343812.01	10497085.87												
1266+00	1343701.46	10497250.05												
1268+04	1343594.47	10497424.02												
1270+00	1343500.61	10497595.84												
1272+01	1343406.20	10497772.19												
1274+06	1343310.65	10497952.94												
1276+00	1343222.10	10498126.07												
1277+99	1343134.05	10498304.14												
1279+98	1343048.65	10498483.42												
1282+02	1342965.66	10498669.01												
1284+06	1342885.52	10498856.05												
1286+03	1342823.58	10499044.04												

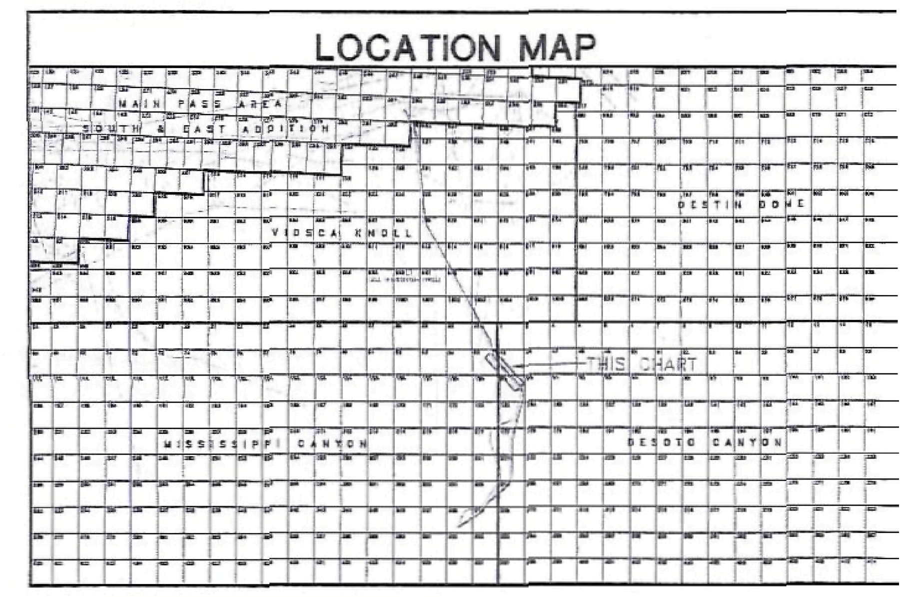
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS

Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL
LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Saipem Inc.

SaiBOS
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY
MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE
SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.
CHART 06 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

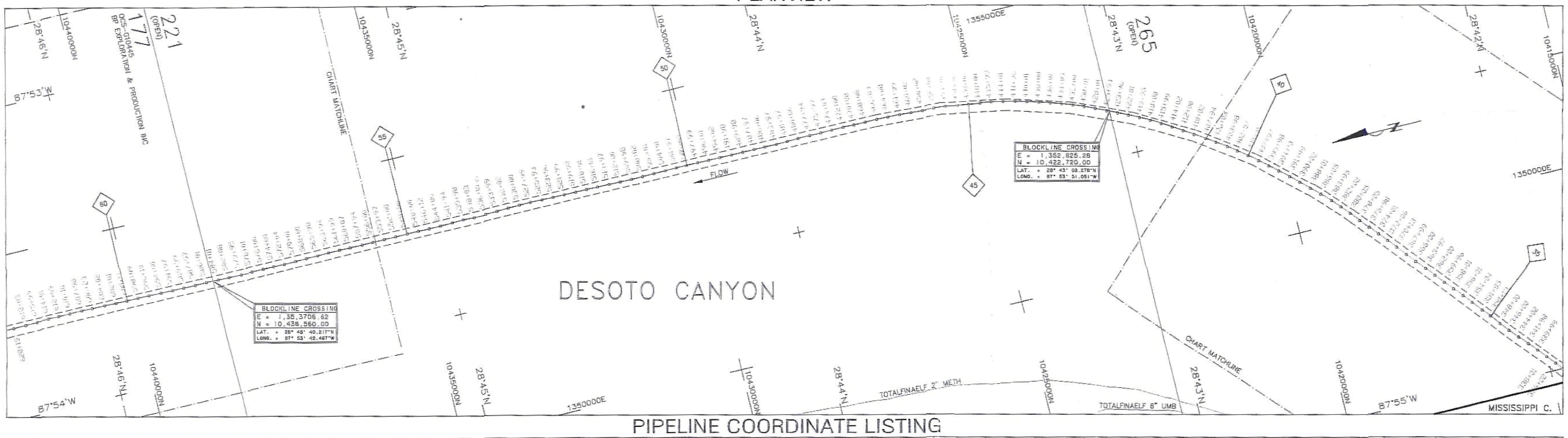
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

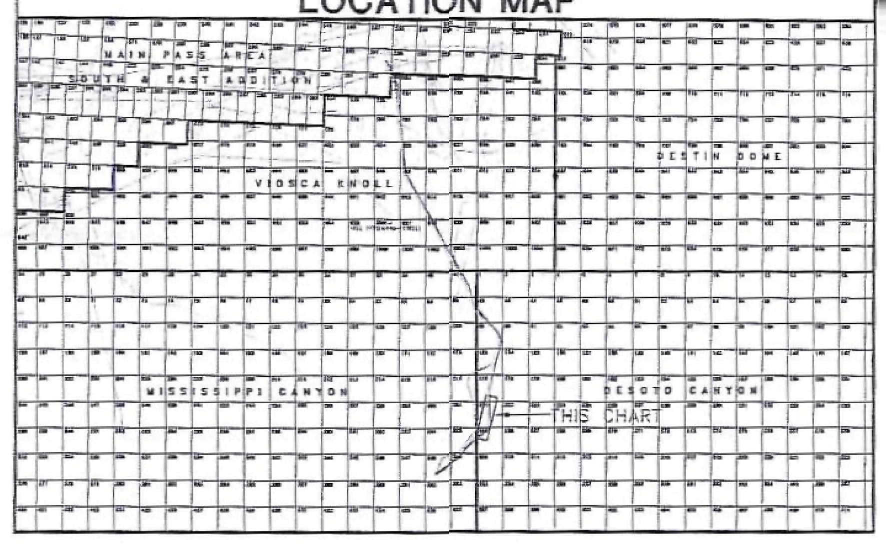
Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-06

PLANVIEW



LOCATION MAP



PIPELINE COORDINATE LISTING

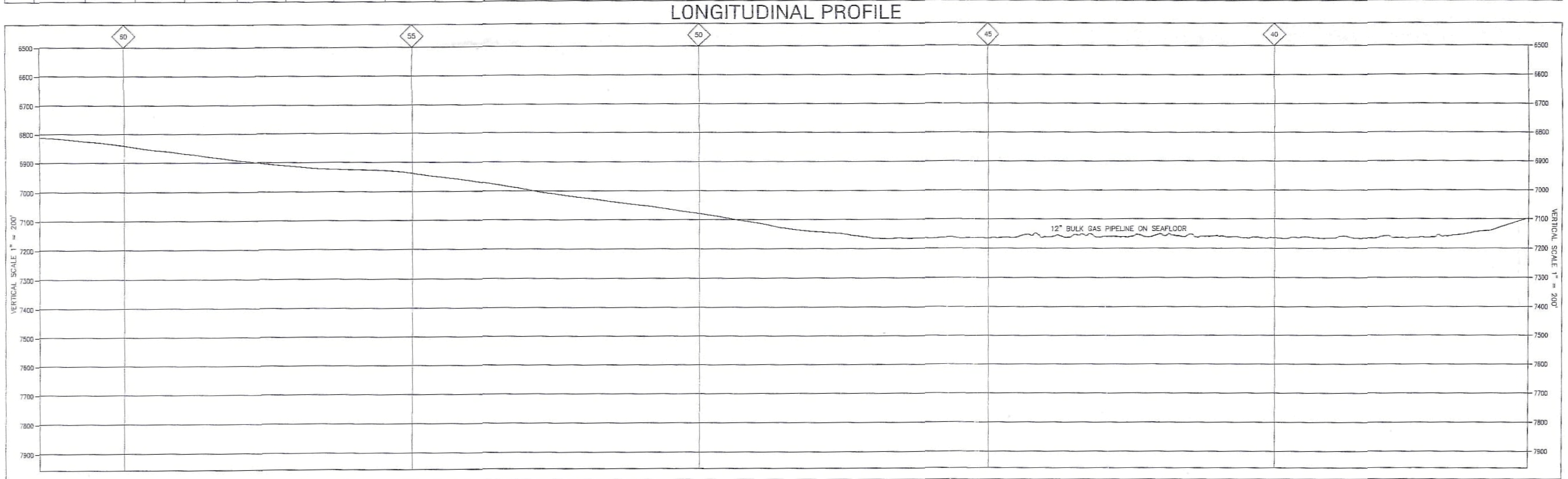
STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING
336+02	1346758.10	10416262.48	374+01	1349657.56	10418717.09
338+01	1346911.61	10416388.01	375+98	1349806.86	10418845.89
339+99	1347063.99	10416515.50	378+05	1349966.51	10418977.34
341+98	1347215.60	10416644.76	380+05	1350120.99	10419103.97
344+02	1347366.94	10416780.48	382+02	1350271.92	10419231.96
346+00	1347515.78	10416911.58	383+95	1350414.07	10419362.36
348+00	1347668.35	10417040.30	386+05	1350564.08	10419509.44
350+13	1347835.87	10417172.13	388+01	1350704.51	10419647.40
351+85	1347965.74	10417286.35	390+02	1350845.29	10419790.94
354+04	1348132.34	10417427.65	391+99	1350981.29	10419933.71
356+01	1348283.63	10417553.44	394+10	1351121.18	10420092.31
358+01	1348434.40	10417685.22	395+98	1351243.32	10420234.69
359+96	1348579.96	10417815.95	397+97	1351373.29	10420386.72
362+00	1348736.75	10417946.35	400+01	1351502.27	10420544.51
363+97	1348889.72	10418070.63	402+07	1351628.71	10420707.48
366+00	1349044.81	10418201.57	403+98	1351742.46	10420861.17
367+99	1349197.66	10418328.85	406+03	1351861.24	10421029.46
370+13	1349362.29	10418464.94	407+94	1351967.81	10421187.94
372+06	1349509.86	10418588.86	410+02	1352081.21	10421362.50

STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING
412+00	1352189.26	10421528.65	450+06	1353518.95	10425079.80
414+02	1352297.64	10421699.53	451+96	1353545.27	10425268.20
415+99	1352400.24	10421868.54	454+01	1353574.48	10425471.20
418+00	1352501.43	10422043.39	456+00	1353593.36	10425670.09
419+95	1352592.53	10422216.94	458+02	1353604.47	10425872.20
422+01	1352681.69	10422403.11	460+02	1353616.69	10426072.10
423+96	1352763.11	10422581.42	461+99	1353629.54	10426269.36
425+94	1352843.92	10422762.02	464+08	1353640.30	10426478.00
428+01	1352928.31	10422952.14	466+03	1353645.44	10426673.27
430+01	1353008.12	10423136.52	468+08	1353645.95	10426878.09
432+00	1353081.71	10423323.11	470+08	1353647.61	10427078.00
434+03	1353150.72	10423514.36	472+00	1353651.63	10427269.95
436+01	1353214.06	10423702.99	474+04	1353650.98	10427474.22
438+00	1353272.75	10423894.04	475+99	1353649.33	10427669.91
440+01	1353328.85	10424088.15	477+94	1353648.65	10427864.36
441+96	1353380.25	10424278.06	480+06	1353649.04	10428076.39
444+01	1353427.73	10424478.08	481+97	1353643.43	10428267.28
445+99	1353467.32	10424673.14	483+97	1353639.34	10428467.21
448+00	1353493.26	10424873.92	486+06	1353643.49	10428676.80

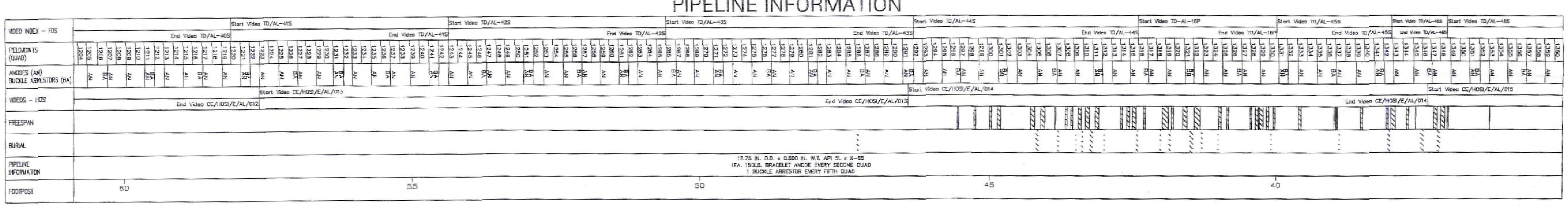
STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING
487+97	1353646.04	10428867.02	525+93	1353678.18	10432663.58
489+98	1353647.08	10429068.15	527+99	1353683.33	10432869.61
491+98	1353646.27	10429268.08	530+00	1353683.80	10433070.12
494+02	1353649.32	10429472.28	532+02	1353681.67	10433271.88
496+01	1353652.15	10429671.55	533+99	1353675.31	10433469.40
497+99	1353655.53	10429869.02	536+01	1353671.67	10433671.17
500+03	1353659.36	10430073.74	538+03	1353672.18	10433872.95
501+97	1353660.28	10430267.65	539+96	1353681.87	10434067.92
504+01	1353657.00	10430471.78	541+94	1353678.90	10434264.25
506+01	1353655.24	10430671.74	544+06	1353674.25	10434476.88
508+02	1353651.47	10430872.31	546+12	1353673.08	10434682.88
509+98	1353650.37	10431068.03	548+00	1353674.74	10434870.10
512+00	1353654.55	10431270.90	549+98	1353676.78	10435068.21
513+97	1353658.23	10431467.22	552+00	1353676.30	10435269.93
516+01	1353661.24	10431671.34	553+97	1353676.64	10435467.42
518+01	1353666.84	10431871.86	556+00	1353678.02	10435670.36
519+98	1353669.13	10432068.75	557+94	1353678.01	10435864.87
521+99	1353671.47	10432269.30	560+07	1353680.38	10436077.50
523+96	1353674.53	10432466.16	561+99	1353688.44	10436269.51

STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING
563+94	1353692.72	10436464.54	602+01	1353727.64	10440271.42									
565+98	1353690.36	10436668.14	604+02	1353732.92	10440471.96									
568+00	1353690.97	10436870.48	606+23	1353737.51	10440693.04									
570+01	1353687.35	10437071.63	607+98	1353740.71	10440868.06									
572+04	1353686.68	10437274.62	610+10	1353740.11	10441080.14									
574+00	1353690.29	10437470.88	612+09	1353739.21	10441279.46									
576+00	1353693.71	10437670.19	614+01	1353740.07	10441470.94									
578+01	1353696.04	10437871.40	615+99	1353739.35	10441669.63									
579+95	1353697.63	10438065.22	618+03	1353738.12	10441873.21									
582+08	1353701.71	10438277.84	620+19	1353736.16	10442089.52									
584+01	1353705.60	10438471.09												
586+01	1353708.45	10438670.98												
587+97	1353707.85	10438867.27												
589+99	1353708.49	10439068.94												
591+97	1353711.22	10439267.09												
594+00	1353715.99	10439470.61												
596+10	1353719.80	10439680.23												
598+09	1353722.85	10439879.52												
600+11	1353724.72	10440081.26												

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+73	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum	: NAD27
Spheroid	: Clarke 1866
Projection	: UTM Zone 16N in US Survey Feet
Central Meridian	: 87deg West
False Easting	: 1640416.667
False Northing	: 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations: Houston (500), Tampa Bay (ID 520), New Orleans (540), Carmen (560)
Micronet Stations: Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 Dale H Lipps 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Saipem Inc.

Sai
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY
MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE
SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.
CHART 03 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

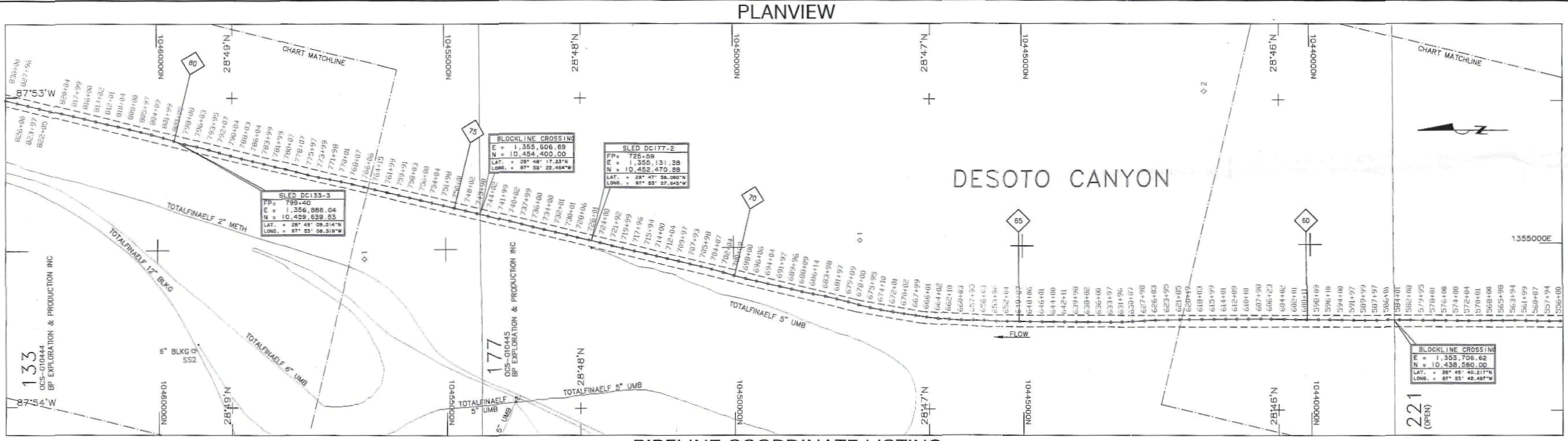
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-03

PLANVIEW

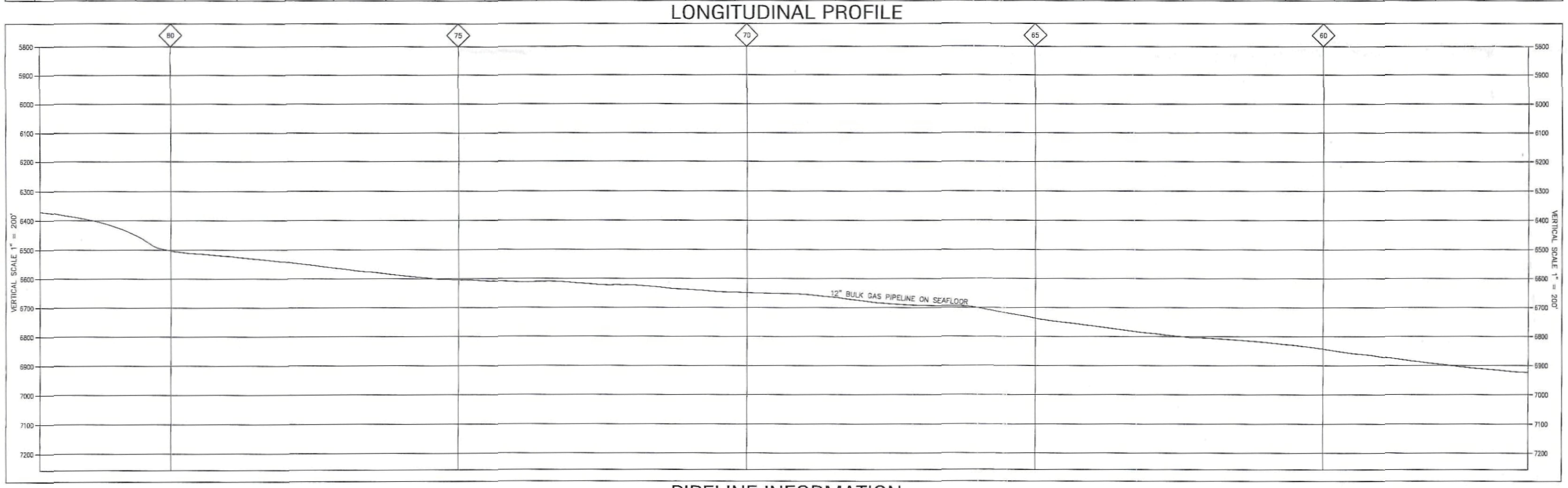


PIPELINE COORDINATE LISTING

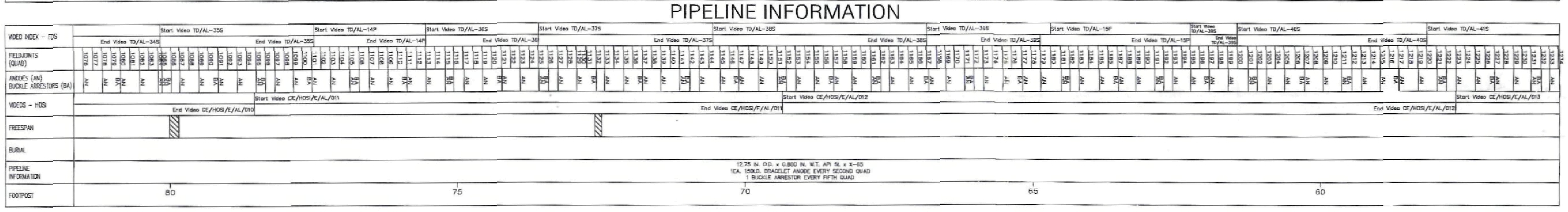
STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING
556+00	1353678.02	10435670.36	594+00	1353715.99	10439470.61	631+96	1353702.11	10443266.89	670+02	1353861.78	10447063.88	707+93	1354724.51	10450752.37
557+94	1353678.01	10435864.87	596+10	1353719.80	10439680.23	633+97	1353697.86	10443467.41	672+01	1353893.59	10447259.64	709+97	1354773.23	10450949.94
560+07	1353680.38	10436077.50	598+09	1353722.85	10439879.52	636+00	1353700.15	10443670.34	674+10	1353927.49	10447465.26	712+04	1354817.54	10451152.68
561+99	1353688.44	10436269.51	600+11	1353724.72	10440081.26	638+02	1353701.83	10443872.13	675+95	1353965.99	10447646.30	714+00	1354861.67	10451343.56
563+94	1353692.72	10436464.54	602+01	1353727.64	10440271.42	639+98	1353703.79	10444068.40	678+00	1354011.96	10447844.81	715+94	1354906.21	10451532.53
565+98	1353690.36	10436668.14	604+02	1353732.92	10440471.96	642+11	1353706.23	10444281.06	679+89	1354061.83	10448027.21	717+96	1354949.62	10451729.06
568+00	1353690.97	10436870.48	606+23	1353737.51	10440693.04	644+00	1353708.69	10444470.66	681+97	1354112.69	10448228.92	719+99	1354995.11	10451927.18
570+01	1353687.35	10437071.63	607+98	1353740.71	10440868.06	646+01	1353711.58	10444671.21	683+98	1354158.67	10448425.07	721+92	1355039.83	10452114.91
572+04	1353686.68	10437274.62	610+10	1353740.11	10441080.14	648+06	1353713.23	10444876.54	686+14	1354202.41	10448636.82	724+00	1355091.73	10452316.82
574+00	1353690.29	10437470.88	612+09	1353739.21	10441279.46	649+87	1353716.48	10445057.69	688+09	1354244.44	10448827.15	726+01	1355141.16	10452511.09
576+00	1353693.71	10437670.19	614+01	1353740.07	10441470.94	652+04	1353721.57	10445273.91	689+96	1354287.69	10449009.03	728+06	1355188.61	10452710.65
578+01	1353696.04	10437871.40	615+99	1353739.35	10441669.63	653+96	1353727.17	10445465.95	691+97	1354333.65	10449204.64	730+01	1355234.82	10452900.46
579+95	1353697.63	10438065.22	618+03	1353738.12	10441873.21	656+03	1353735.61	10445673.18	694+04	1354380.16	10449406.01	732+01	1355280.67	10453095.08
582+08	1353701.71	10438277.84	620+19	1353736.16	10442089.52	657+93	1353742.29	10445863.40	696+06	1354426.08	10449602.59	734+00	1355327.63	10453288.39
584+01	1353705.60	10438471.09	621+85	1353734.22	10442254.96	660+03	1353744.03	10446073.08	698+00	1354467.59	10449792.62	736+00	1355375.29	10453482.59
586+01	1353708.45	10438670.98	623+95	1353731.21	10442465.20	662+10	1353759.72	10446279.39	700+09	1354518.54	10449994.99	737+99	1355423.66	10453675.93
587+97	1353707.85	10438867.27	626+03	1353728.44	10442673.61	664+02	1353779.29	10446470.26	702+04	1354572.12	10450182.97	740+02	1355473.82	10453872.65
589+99	1353708.49	10439068.94	627+98	1353720.14	10442868.09	666+01	1353804.04	10446667.01	704+07	1354626.90	10450378.70	741+99	1355522.04	10454063.71
591+97	1353711.22	10439267.09	630+09	1353710.92	10443079.64	667+99	1353832.00	10446863.23	705+98	1354677.49	10450562.83	744+02	1355571.90	10454259.96

STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)		STATION	UTM ZONE 16 N PROJECTION (USFT)	
	EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING		EASTING	NORTHING
745+98	1355619.08	10454450.33	783+99	1356505.22	10458146.42	822+05	1357425.19	10461839.72						
748+02	1355666.93	10454648.46	786+04	1356555.09	10458345.89	823+97	1357471.64	10462026.43						
750+01	1355713.56	10454842.37	788+03	1356603.14	10458538.04	826+00	1357521.39	10462223.26						
751+98	1355758.36	10455033.40	790+04	1356652.10	10458733.83	827+96	1357565.87	10462413.27						
754+04	1355805.61	10455234.01	792+07	1356703.25	10458929.65	830+00	1357615.39	10462611.70						
756+00	1355850.49	10455424.88	793+95	1356753.05	10459111.03									
758+03	1355896.87	10455622.47	796+03	1356807.75	10459312.41									
759+91	1355939.81	10455805.68	798+08	1356851.65	10459512.30									
761+99	1355987.27	10456008.53	800+05	1356906.49	10459702.11									
764+15	1356036.59	10456218.74	801+99	1356960.54	10459888.53									
766+06	1356085.76	10456403.70	804+09	1357014.89	10460091.34									
768+07	1356136.89	10456597.62	805+97	1357060.82	10460273.30									
770+01	1356182.54	10456786.71	808+00	1357109.32	10460470.87									
771+98	1356225.69	10456978.48	810+04	1357154.49	10460669.04									
773+99	1356267.27	10457175.56	812+01	1357194.35	10460862.23									
775+97	1356310.74	10457368.66	814+02	1357240.25	10461058.47									
778+07	1356361.65	10457572.26	816+00	1357286.81	10461250.65									
780+07	1356410.23	10457766.55	817+99	1357331.56	10461444.26									
781+99	1356456.75	10457952.57	820+04	1357378.38	10461644.20									

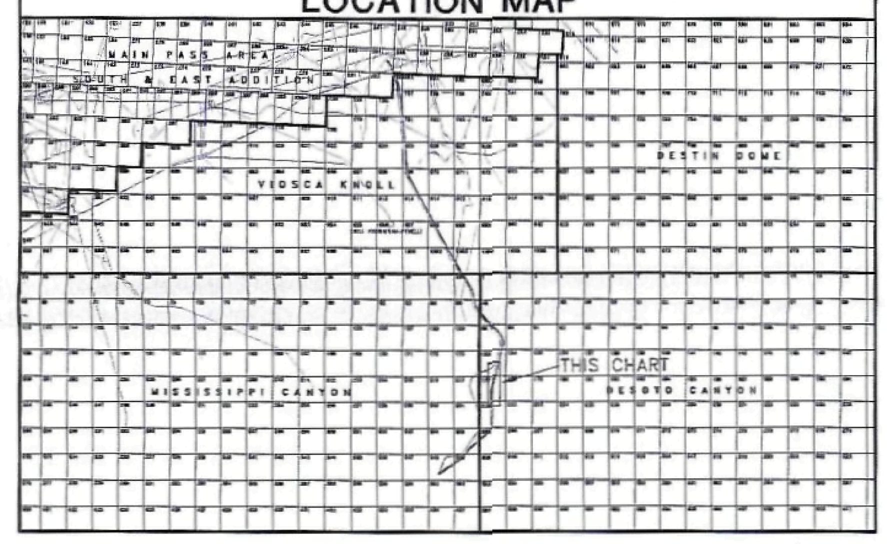
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

NAVIGATION SYSTEMS

Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT.

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 Dale H Lipps DATE 1/30/03

Canyon Express

Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.

SaiBOS CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT

EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 04 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162

THALES

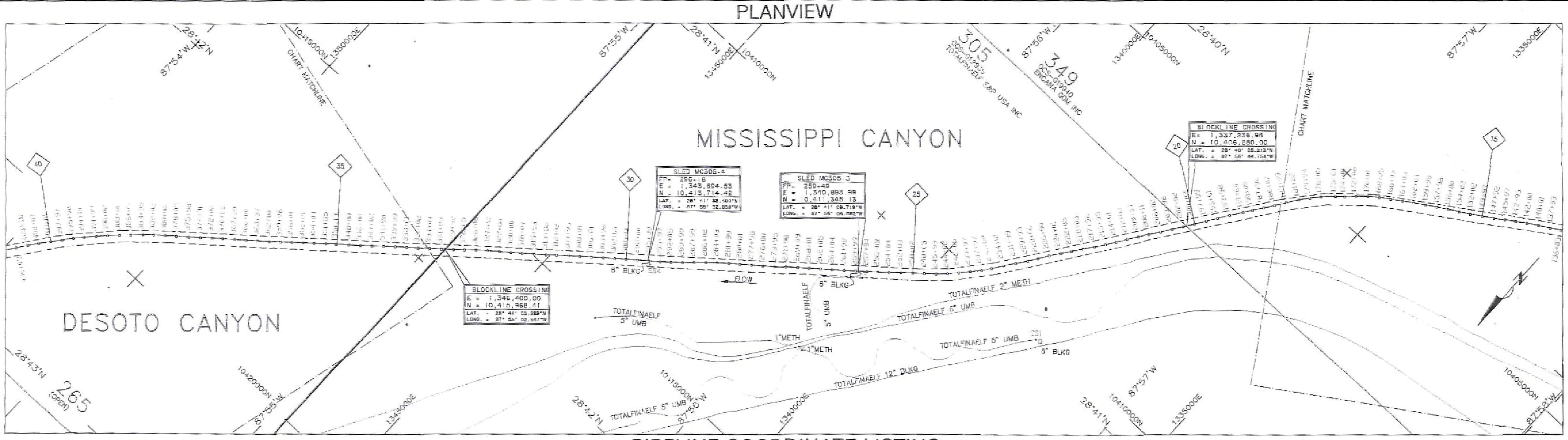
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-04

PLANVIEW

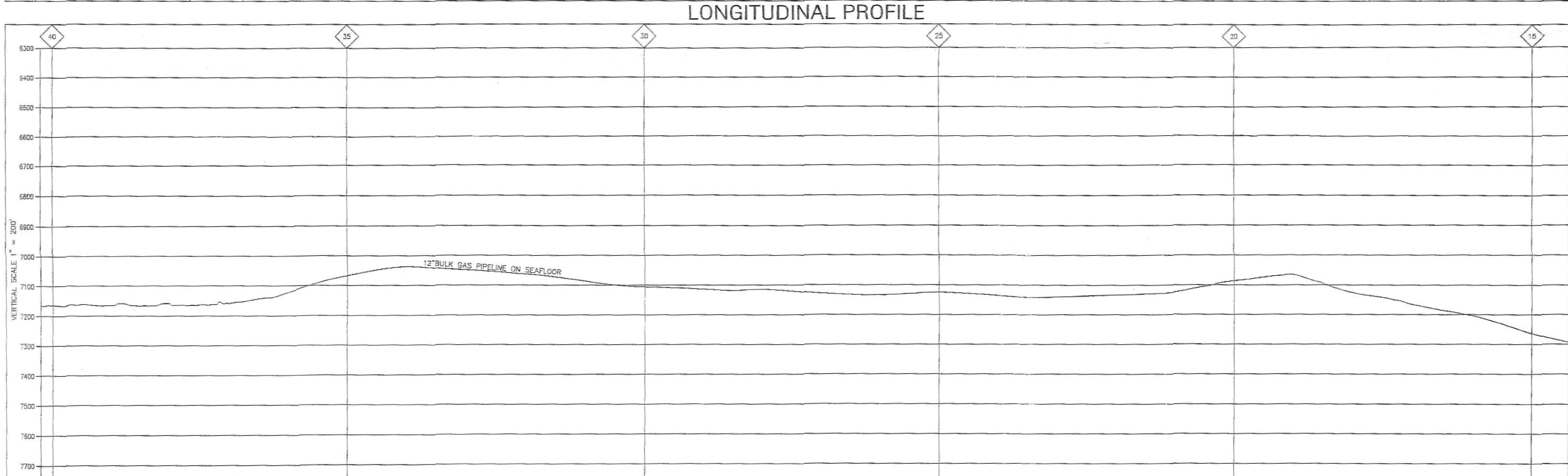


PIPELINE COORDINATE LISTING

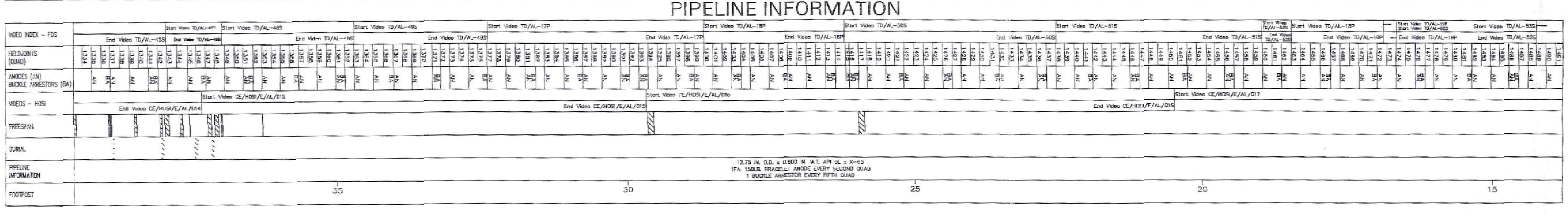
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
136+03	1332461.92	10402541.90	174+00	1335602.78	10404677.68	212+03	1337847.22	10407746.11	250+02	1340180.21	10410722.42
137+93	1332622.04	10402643.47	175+61	1335725.25	10404784.88	214+01	1337956.70	10407910.48	252+03	1340332.20	10410854.08
140+01	1332800.51	10402751.44	178+05	1335899.89	10404956.67	215+95	1338065.02	10408072.39	254+04	1340481.11	10410988.35
142+00	1332968.33	10402857.73	179+94	1336024.48	10405101.13	217+96	1338181.26	10408235.88	256+03	1340631.53	10411119.11
143+93	1333128.39	10402966.80	181+82	1336140.81	10405250.46	220+03	1338305.63	10408401.46	257+94	1340776.47	10411243.08
145+97	1333297.62	10403079.82	183+99	1336264.30	10405430.94	222+05	1338424.31	10408564.59	259+99	1340931.32	10411377.43
147+92	1333460.89	10403187.63	186+07	1336381.58	10405602.64	224+01	1338540.55	10408722.69	261+98	1341083.23	10411506.19
149+97	1333631.94	10403299.89	187+96	1336489.13	10405758.47	226+00	1338656.20	10408884.84	264+04	1341242.67	10411637.32
152+02	1333803.58	10403411.44	190+00	1336605.72	10405925.75	228+06	1338767.85	10409057.93	266+05	1341398.57	10411764.29
154+02	1333974.65	10403516.57	191+64	1336699.45	10406060.40	229+93	1338872.41	10409212.93	268+01	1341549.30	10411889.01
156+00	1334144.35	10403619.20	193+98	1336832.59	10406253.42	231+99	1338995.35	10409378.67	269+99	1341700.91	10412016.53
157+98	1334312.81	10403722.60	196+01	1336940.63	10406425.72	234+01	1339113.23	10409543.35	271+98	1341853.93	10412143.45
159+98	1334482.74	10403828.88	197+99	1337047.11	10406592.15	236+08	1339228.46	10409714.90	273+95	1342003.64	10412271.52
162+04	1334655.03	10403940.58	200+02	1337157.86	10406762.27	237+97	1339338.68	10409867.76	276+00	1342163.45	10412400.58
164+03	1334820.45	10404051.28	202+02	1337270.20	10406927.78	239+97	1339464.13	10410023.24	277+98	1342317.98	10412524.66
166+09	1334990.91	10404167.49	203+98	1337381.71	10407089.73	242+05	1339602.49	10410177.77	280+01	1342475.35	10412651.97
168+05	1335154.74	10404278.52	206+02	1337496.62	10407258.01	244+02	1339735.66	10410321.66	281+99	1342631.04	10412774.32
170+01	1335312.22	10404398.86	208+11	1337617.33	10407428.82	245+99	1339876.16	10410459.42	284+03	1342786.69	10412906.53
172+06	1335465.18	10404538.13	209+97	1337727.85	10407577.50	248+05	1340030.55	10410593.97	286+02	1342934.69	10413039.45

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
287+99	1343077.35	10413175.91	326+06	1345999.74	10415615.71	363+97	1348889.72	10418070.63	402+07	1351628.71	10420707.48						
289+99	1343225.62	10413311.24	328+05	1346148.06	10415748.77	366+00	1349044.81	10418201.57	403+98	1351742.46	10420861.17						
292+05	1343379.05	10413448.61	329+92	1346288.86	10415872.61	367+99	1349197.66	10418328.85	406+03	1351861.24	10421029.46						
293+97	1343524.46	10413574.63	331+99	1346445.95	10416007.25	370+13	1349362.29	10418464.94									
295+99	1343680.25	10413702.93	334+04	1346603.27	10416138.44	372+06	1349509.86	10418588.86									
298+00	1343836.16	10413829.03	336+02	1346758.10	10416262.48	374+01	1349657.56	10418717.09									
300+04	1343994.64	10413958.54	338+01	1346911.61	10416388.01	375+98	1349806.86	10418845.89									
302+00	1344145.12	10414083.33	339+99	1347063.99	10416515.50	378+05	1349966.51	10418977.34									
303+96	1344295.94	10414208.98	341+98	1347215.60	10416644.76	380+05	1350120.99	10419103.97									
306+01	1344453.23	10414340.49	344+02	1347366.94	10416780.48	382+02	1350271.92	10419231.96									
308+01	1344606.46	10414468.88	346+00	1347515.78	10416911.58	383+95	1350414.07	10419362.36									
309+93	1344753.64	10414592.49	348+00	1347668.35	10417040.30	386+05	1350564.08	10419509.44									
312+02	1344912.78	10414728.23	350+13	1347835.87	10417172.13	388+01	1350704.51	10419647.40									
313+86	1345052.92	10414846.46	351+85	1347965.74	10417286.35	390+02	1350845.29	10419790.94									
315+93	1345212.57	10414978.53	354+04	1348132.34	10417427.65	391+99	1350981.29	10419933.71									
318+04	1345376.22	10415112.32	356+01	1348283.63	10417553.44	394+10	1351121.18	10420092.31									
320+00	1345528.61	10415235.44	358+01	1348434.40	10417685.22	395+98	1351243.32	10420234.69									
322+00	1345684.38	10415360.07	359+96	1348579.96	10417815.95	397+97	1351373.29	10420386.72									
324+02	1345843.27	10415486.26	362+00	1348736.75	10417946.35	400+01	1351502.27	10420544.51									

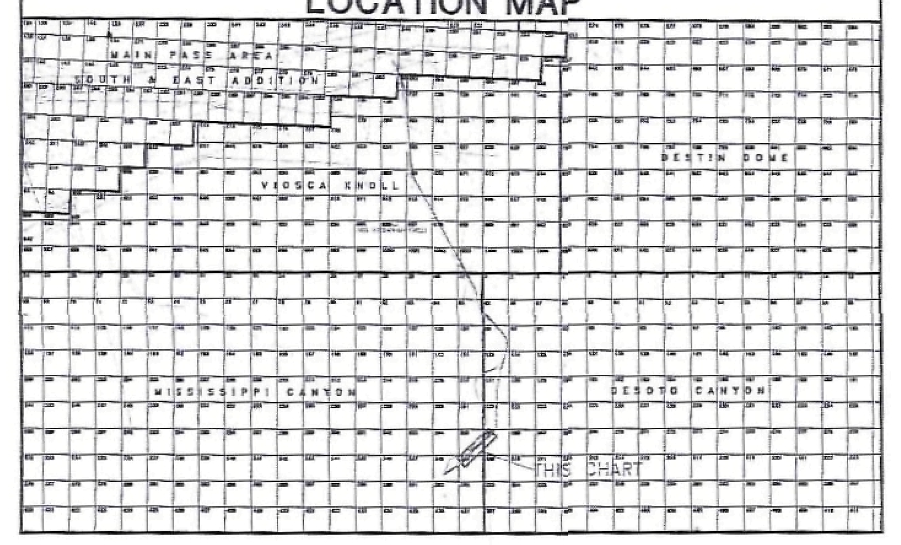
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/– 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS–G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS–LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA
Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek
Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = –151.0 meters
dz = –175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.

Sai
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT

EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY
MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE
SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.
CHART 02 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713–784–4482 Fax: 713–784–8162

THALES

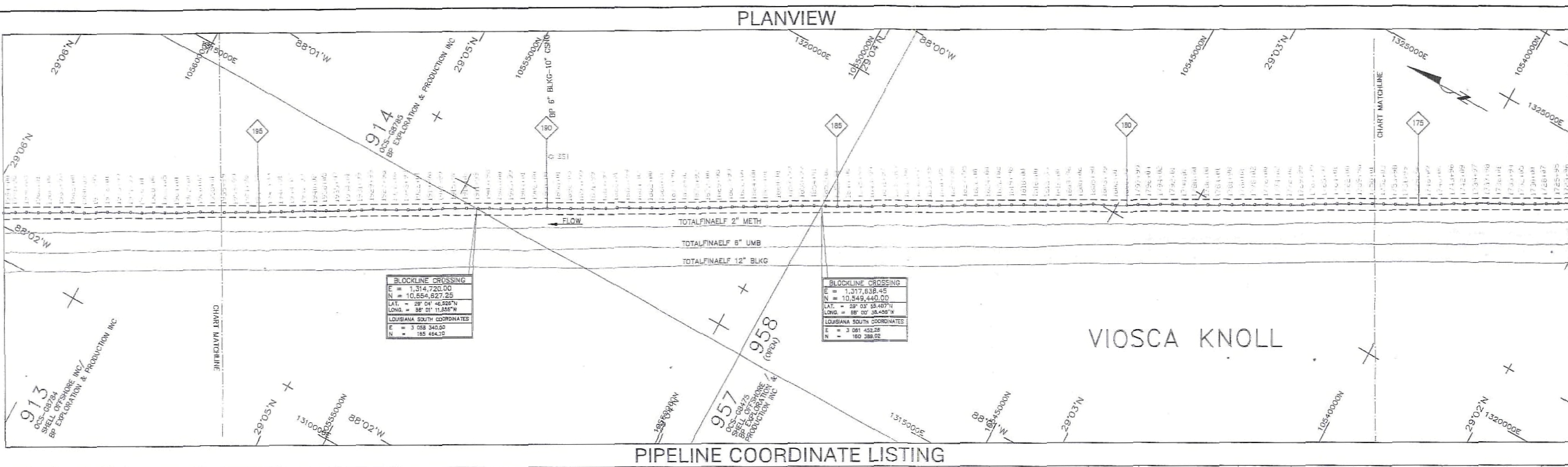
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

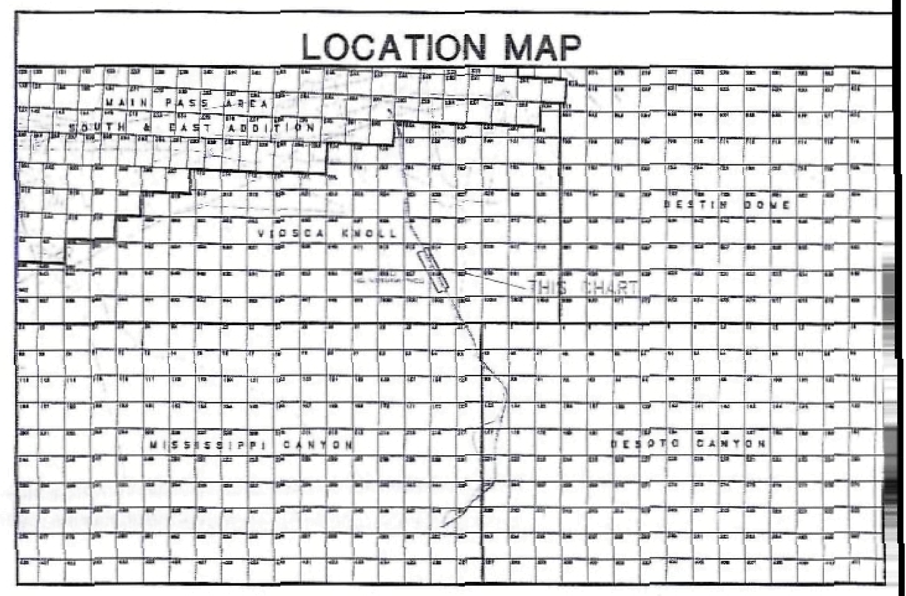
Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS–BUILT

	Date of Survey : JAN–NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769–0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL–02

PLANVIEW



LOCATION MAP



PIPELINE COORDINATE LISTING

UTM ZONE 16 N PROJECTION (USFT)

STATION	EASTING	NORTHING
1723+96	1323947.76	10538220.71
1725+95	1323858.80	10538399.27
1728+07	1323748.22	10538579.53
1730+00	1323647.16	10538744.81
1732+05	1323544.32	10538921.80
1733+94	1323455.20	10539088.61
1736+01	1323358.54	10539271.18
1737+98	1323263.39	10539444.65
1739+97	1323171.33	10539620.53
1742+09	1323062.19	10539802.81
1743+96	1322971.41	10539966.27
1746+06	1322859.39	10540144.32
1748+09	1322754.59	10540317.53
1749+96	1322660.97	10540480.48
1751+99	1322560.38	10540656.49
1753+98	1322463.70	10540830.07
1756+03	1322376.96	10541016.03
1758+01	1322281.66	10541190.09
1759+98	1322185.71	10541362.05

STATION	EASTING	NORTHING
1762+00	1322086.11	10541538.18
1764+01	1321986.55	10541713.52
1765+97	1321887.73	10541881.57
1767+99	1321786.80	10542057.24
1769+99	1321685.80	10542229.73
1772+02	1321587.60	10542407.20
1774+02	1321490.46	10542581.80
1776+00	1321394.76	10542755.71
1778+02	1321293.57	10542929.78
1780+01	1321200.70	10543106.46
1781+98	1321101.57	10543276.92
1784+01	1320998.46	10543451.42
1786+00	1320905.53	10543628.01
1788+00	1320806.89	10543801.52
1790+01	1320708.71	10543977.16
1792+01	1320616.94	10544154.32
1794+02	1320520.34	10544331.09
1796+04	1320414.00	10544503.05
1797+99	1320323.72	10544675.90

STATION	EASTING	NORTHING
1800+02	1320224.43	10544853.21
1802+01	1320120.09	10545022.81
1803+99	1320026.75	10545197.64
1805+90	1319944.94	10545369.99
1808+02	1319829.20	10545548.53
1809+96	1319733.27	10545717.63
1812+00	1319629.46	10545892.59
1813+99	1319534.93	10546067.61
1816+00	1319443.60	10546246.75
1818+00	1319349.41	10546423.35
1819+98	1319250.61	10546595.71
1822+02	1319146.49	10546770.52
1824+00	1319050.11	10546943.52
1826+01	1318948.95	10547117.31
1827+95	1318855.27	10547287.92
1829+98	1318757.56	10547464.97
1831+95	1318657.52	10547634.70
1833+99	1318556.18	10547812.46
1836+02	1318455.76	10547988.62

STATION	EASTING	NORTHING
1838+00	1318356.54	10548160.03
1839+83	1318265.46	10548318.76
1841+97	1318163.23	10548506.89
1843+99	1318059.78	10548680.66
1845+99	1317965.04	10548856.19
1848+00	1317863.16	10549029.24
1850+01	1317762.32	10549203.54
1852+00	1317671.57	10549380.93
1854+01	1317578.00	10549558.39
1855+99	1317479.20	10549730.27
1857+99	1317380.21	10549904.14
1860+01	1317279.19	10550079.40
1862+01	1317181.22	10550253.14
1864+00	1317082.65	10550426.09
1866+00	1316985.32	10550601.36
1867+99	1316884.29	10550772.83
1869+98	1316776.38	10550940.84
1872+00	1316676.94	10551116.59
1873+92	1316587.04	10551286.22

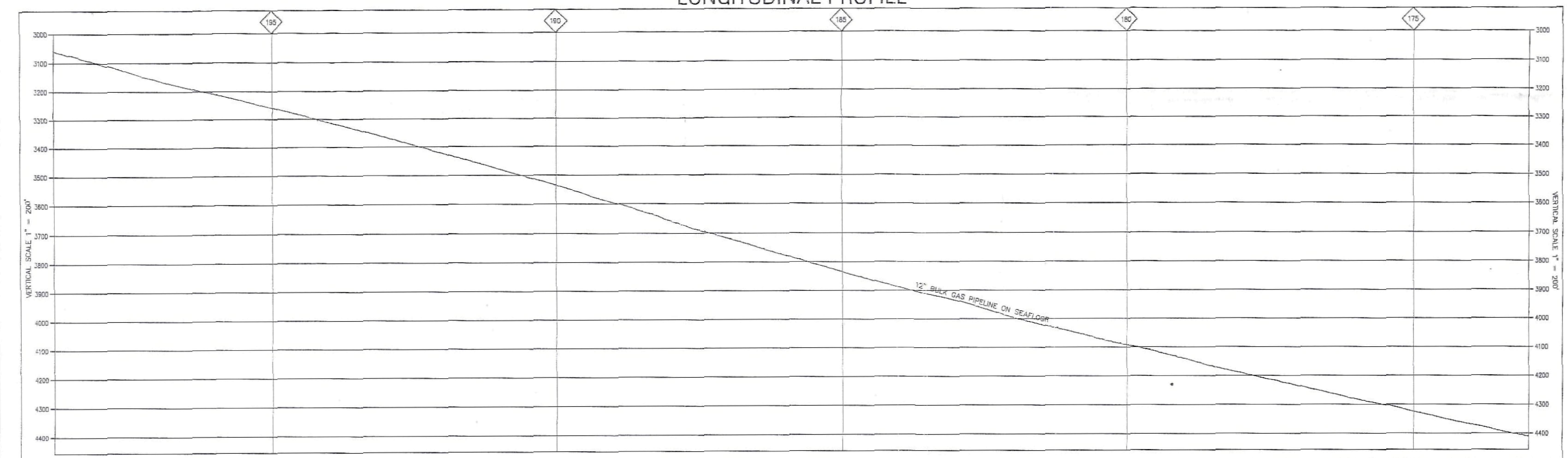
STATION	EASTING	NORTHING
1876+02	1316493.34	10551474.03
1877+98	1316392.60	10551642.33
1880+01	1316293.97	10551820.13
1882+00	1316195.58	10551992.71
1884+02	1316095.71	10552167.87
1885+99	1316000.51	10552341.07
1888+01	1315900.51	10552516.50
1889+97	1315802.49	10552685.84
1891+99	1315705.82	10552863.00
1893+99	1315608.34	10553037.80
1896+03	1315507.52	10553215.10
1898+01	1315410.96	10553388.73
1900+00	1315316.93	10553563.19
1902+00	1315213.05	10553734.41
1904+01	1315123.48	10553914.89
1905+99	1315024.16	10554085.83
1908+00	1314923.68	10554260.91
1909+98	1314834.01	10554437.03
1911+99	1314730.37	10554609.73

STATION	EASTING	NORTHING
1914+02	1314637.25	10554789.84
1915+92	1314543.45	10554955.38
1917+99	1314440.37	10555134.40
1919+98	1314339.90	10555306.53
1922+01	1314240.30	10555483.34
1923+99	1314137.45	10555652.93
1926+00	1314037.29	10555827.40
1927+98	1313942.23	10556000.56
1929+99	1313852.08	10556180.09
1931+99	1313742.73	10556348.03
1934+01	1313648.87	10556527.96
1935+97	1313549.03	10556695.87
1938+05	1313446.76	10556877.19
1940+02	1313351.34	10557049.59
1941+99	1313255.53	10557221.84
1944+02	1313147.95	10557393.88
1946+01	1313045.50	10557564.53
1947+99	1312946.12	10557736.35
1949+97	1312853.33	10557910.77

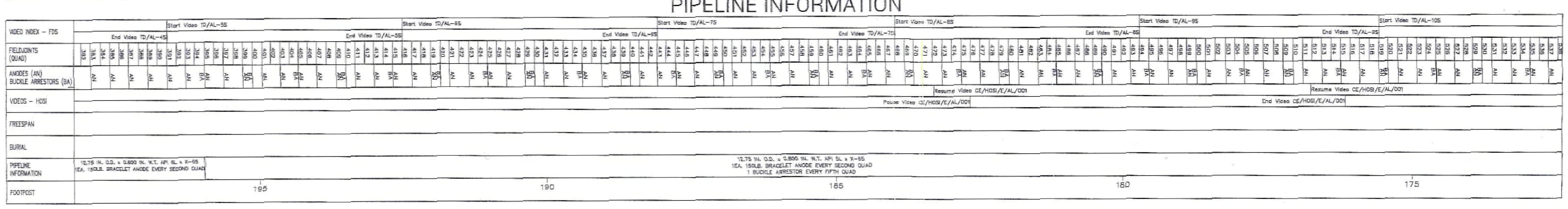
STATION	EASTING	NORTHING
1951+98	1312752.54	10558085.27
1953+99	1312649.98	10558258.30
1955+99	1312549.97	10558431.71
1958+01	1312455.62	10558610.34
1960+02	1312359.87	10558786.65
1962+00	1312260.25	10558958.30
1964+01	1312166.44	10559135.69
1966+05	1312066.63	10559313.61
1968+00	1311975.74	10559486.63
1970+01	1311868.48	10559656.65
1971+99	1311782.46	10559835.24
1973+99	1311684.07	10560009.39
1976+01	1311587.06	10560186.65
1977+99	1311487.62	10560358.20
1980+03	1311384.44	10560533.52
1982+00	1311297.57	10560711.51
1983+95	1311202.98	10560882.01
1986+00	1311096.81	10561057.53
1988+01	1310996.91	10561231.78

STATION	EASTING	NORTHING
1990+05	1310904.00	10561413.05
1991+98	1310803.59	10561578.53
1994+00	1310707.12	10561756.06

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

PLANVIEW		LONGITUDINAL PROFILE	
110	DESIGN ROUTE FOOTPOST		MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET		
	BLOCK BOUNDARY	PIPELINE INFORMATION	
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS	
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR	
	BLOCK AREA BOUNDARY		
998+79	STATION		

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS

Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = -151.0 meters
dz = -175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL
SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.
Saibos CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE

SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 09 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162

THALES

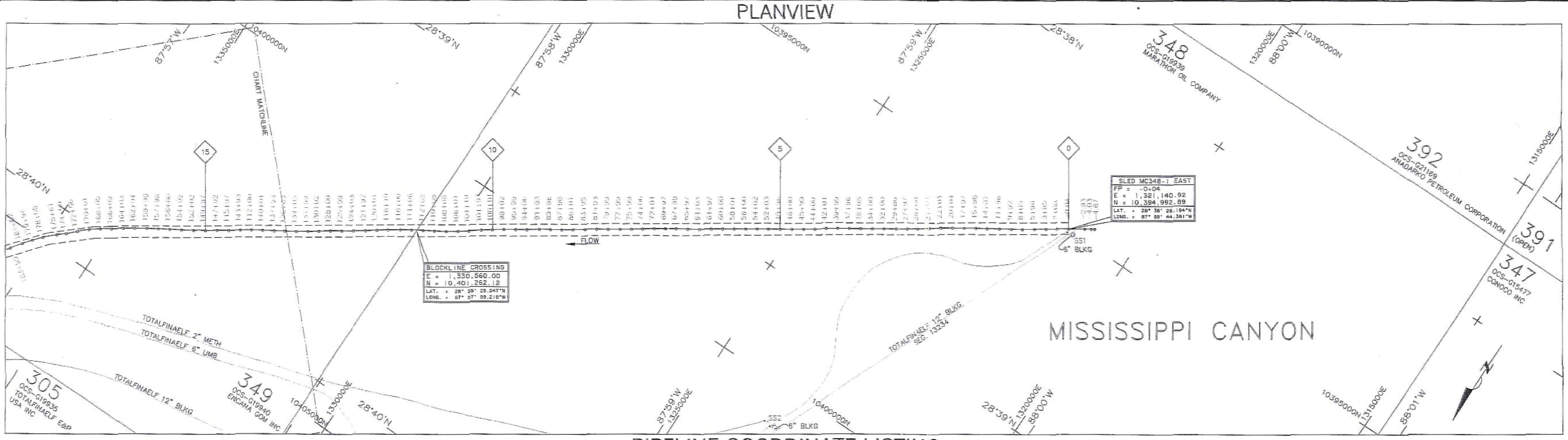
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

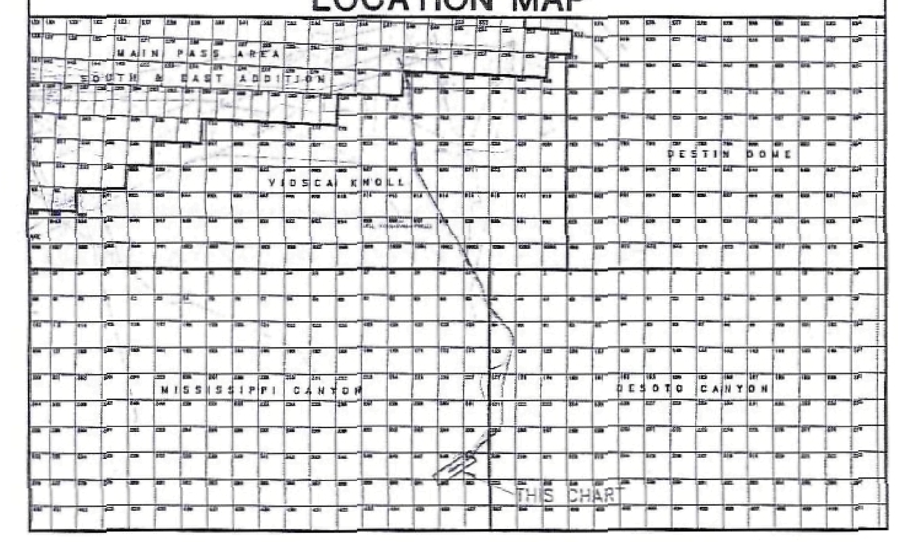
Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-09

PLANVIEW



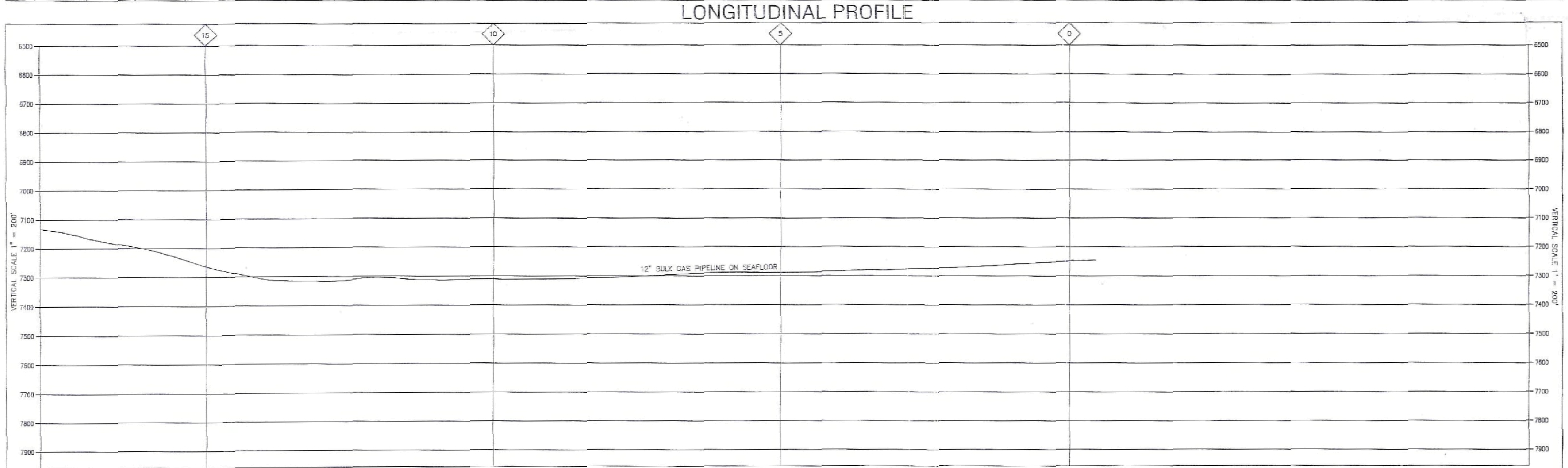
LOCATION MAP



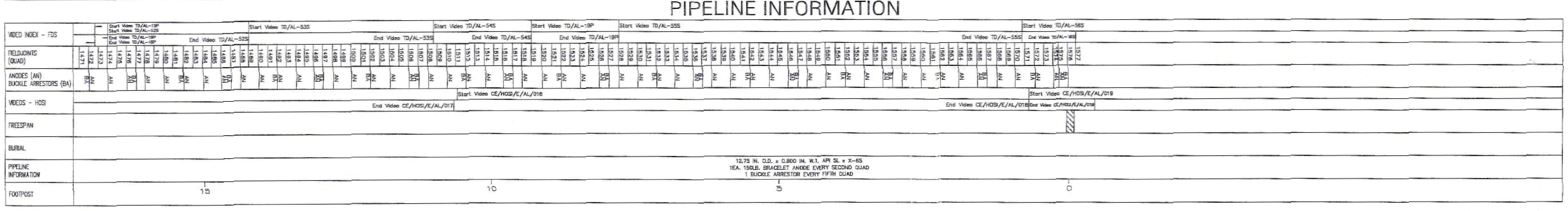
PIPELINE COORDINATE LISTING

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	EASTING	NORTHING	STATION	EASTING	NORTHING	STATION	EASTING	NORTHING	STATION	EASTING	NORTHING	STATION	EASTING	NORTHING
−4+67	1320753.65	10394739.61	32+00	1323811.94	10396763.32	69+97	1326976.83	10398859.98	108+06	1330127.16	10401002.07	145+97	1333297.62	10403079.82	183+99	1336264.30	10405430.94
−4+03	1320807.37	10394775.13	34+00	1323977.86	10396873.62	72+01	1327145.97	10398974.27	110+08	1330299.34	10401106.67	147+92	1333460.89	10403187.63			
−2+93	1320899.74	10394835.72	36+05	1324148.99	10396987.15	74+06	1327314.55	10399091.39	112+02	1330466.99	10401206.59	149+97	1333631.94	10403299.89			
−0+04	1321140.92	10394992.89	37+96	1324309.69	10397091.19	75+99	1327472.25	10399203.18	114+06	1330641.18	10401311.58	152+02	1333803.58	10403411.44			
2+00	1321311.92	10395104.70	39+99	1324478.76	10397203.35	77+99	1327636.85	10399316.04	116+00	1330803.77	10401418.56	154+02	1333974.65	10403516.57			
3+95	1321474.76	10395212.09	42+04	1324648.09	10397317.49	79+99	1327802.96	10399427.25	118+10	1330977.33	10401536.24	156+00	1334144.35	10403619.20			
5+96	1321639.20	10395326.81	44+00	1324810.24	10397429.22	81+93	1327966.83	10399532.18	120+01	1331133.34	10401646.48	157+98	1334312.81	10403722.60			
8+05	1321811.45	10395445.05	45+99	1324974.29	10397541.19	83+95	1328135.46	10399642.81	121+92	1331287.75	10401759.62	159+98	1334482.74	10403828.68			
9+92	1321968.68	10395546.59	48+00	1325140.76	10397652.82	86+01	1328305.30	10399758.84	124+03	1331462.47	10401876.81	162+04	1334655.03	10403940.58			
11+96	1322142.01	10395654.33	49+96	1325305.78	10397760.44	87+98	1328467.86	10399870.76	125+99	1331627.12	10401983.99	164+03	1334820.45	10404051.28			
14+07	1322319.77	10395768.27	52+03	1325478.23	10397873.76	89+96	1328634.60	10399977.84	128+00	1331795.71	10402092.73	166+09	1334990.91	10404167.49			
15+98	1322481.98	10395869.20	54+02	1325644.35	10397984.51	91+93	1328801.27	10400082.88	130+02	1331960.94	10402210.06	168+05	1335154.74	10404278.52			
17+97	1322648.75	10395977.32	56+00	1325807.94	10398094.44	94+06	1328975.33	10400205.80	131+99	1332122.72	10402321.74	170+01	1335312.22	10404398.86			
20+04	1322822.64	10396089.83	58+01	1325975.65	10398206.57	95+99	1329136.37	10400312.63	134+05	1332294.88	10402435.05	172+06	1335465.18	10404538.13			
22+04	1322989.23	10396200.90	60+00	1326141.08	10398316.32	98+02	1329305.34	10400423.52	136+03	1332461.92	10402541.90	174+00	1335602.78	10404677.68			
24+03	1323154.12	10396311.75	61+97	1326305.78	10398425.57	100+01	1329468.71	10400538.86	137+93	1332622.04	10402643.47	175+61	1335725.25	10404784.88			
26+08	1323320.56	10396432.68	64+03	1326476.34	10398539.72	101+97	1329628.64	10400651.95	140+01	1332800.51	10402751.44	178+05	1335899.89	10404956.67			
27+97	1323475.33	10396541.06	65+97	1326640.49	10398644.57	104+10	1329800.58	10400777.68	142+00	1332968.33	10402857.73	179+94	1336024.48	10405101.13			
29+86	1323631.71	10396647.23	67+98	1326811.10	10398750.48	106+01	1329957.41	10400886.53	143+93	1333128.39	10402966.80	181+82	1336140.81	10405250.46			

LONGITUDINAL PROFILE



PIPELINE INFORMATION



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE	
110	DESIGN ROUTE FOOTPOST		MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET		
	BLOCK BOUNDARY	PIPELINE INFORMATION	
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS	
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR	
	BLOCK AREA BOUNDARY		
996+79	STATION		

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA
Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 Dale H Lipps DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.

SaiBOS
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 01 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

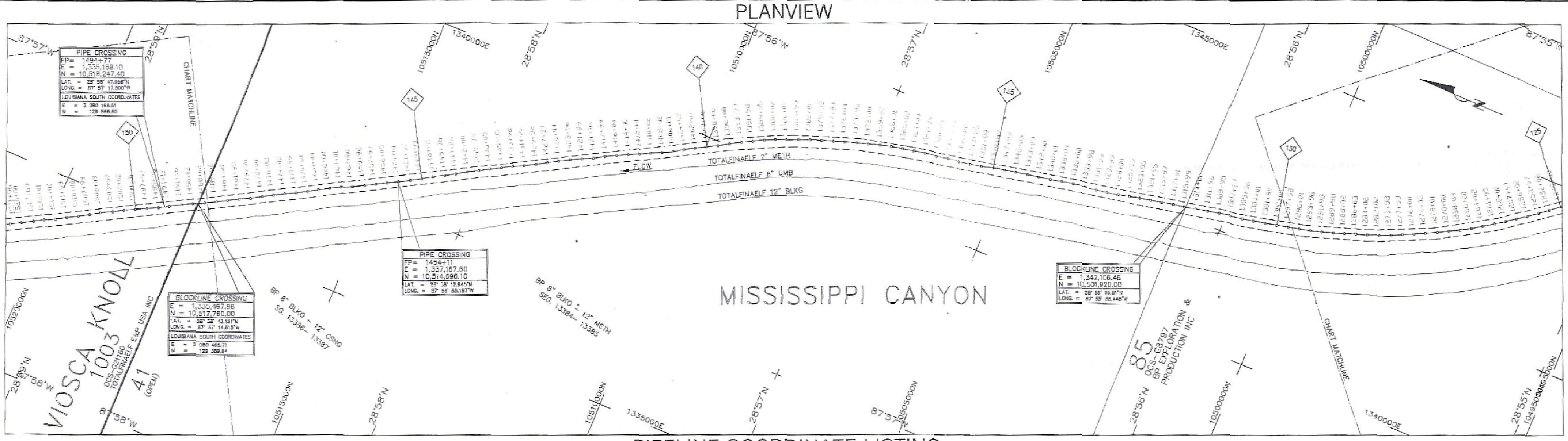
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-01

PLANVIEW



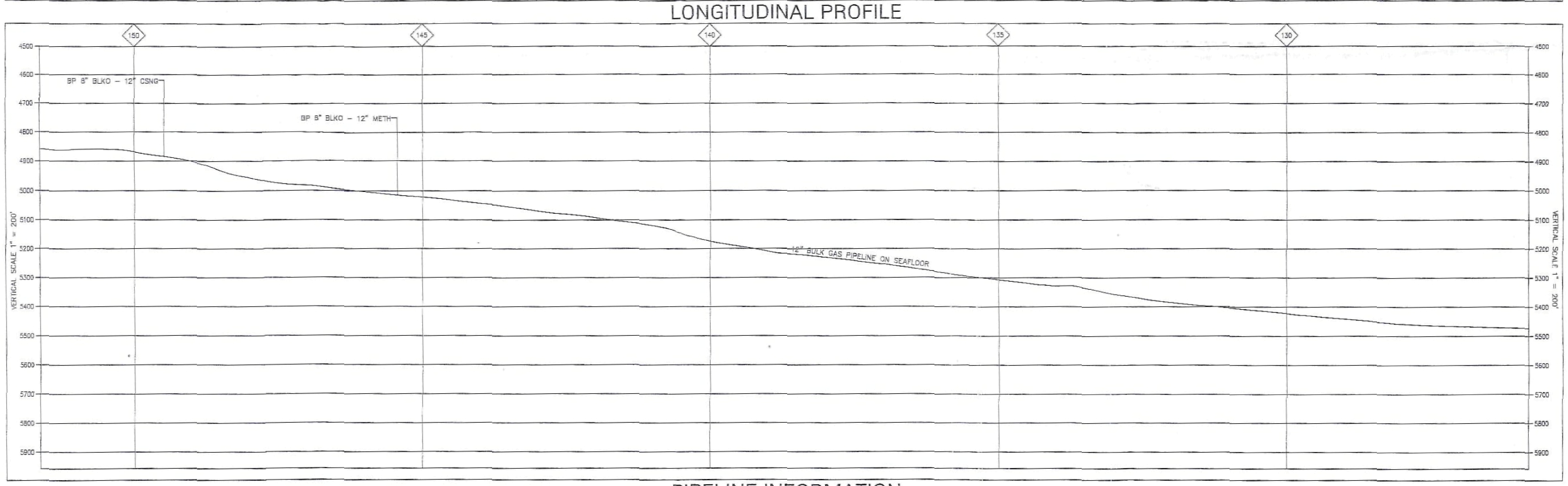
PIPELINE COORDINATE LISTING

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1249+95	1344660.19	10495967.64	1288+02	1342753.45	10499229.30	1325+99	1341892.94	10502922.42	1364+04	1341161.42	10506656.24
1252+06	1344525.45	10496126.63	1289+98	1342686.21	10499413.63	1328+00	1341841.06	10503117.10	1366+02	1341121.74	10506850.49
1253+97	1344406.73	10496278.07	1291+98	1342628.79	10499604.49	1329+99	1341800.10	10503311.41	1368+01	1341077.91	10507045.39
1256+02	1344277.45	10496436.56	1293+96	1342570.56	10499793.70	1331+99	1341767.41	10503508.73	1369+97	1341025.87	10507235.32
1257+97	1344157.78	10496590.40	1296+01	1342521.35	10499992.39	1333+98	1341735.87	10503705.72	1372+00	1340964.06	10507429.56
1260+00	1344040.66	10496756.13	1297+98	1342477.39	10500183.65	1336+00	1341703.79	10503905.60	1373+98	1340902.93	10507619.11
1261+95	1343929.17	10496915.61	1300+00	1342432.00	10500380.35	1338+04	1341662.22	10504104.84	1376+04	1340838.76	10507814.59
1264+02	1343812.01	10497085.87	1301+98	1342390.75	10500573.52	1340+01	1341619.56	10504297.55	1377+94	1340774.66	10507993.65
1266+00	1343701.46	10497250.05	1304+01	1342347.55	10500771.43	1342+00	1341584.61	10504493.06	1379+99	1340708.66	10508189.08
1268+04	1343594.47	10497424.02	1305+96	1342310.93	10500963.34	1343+99	1341545.37	10504688.85	1382+01	1340643.01	10508380.08
1270+00	1343500.61	10497595.84	1307+97	1342277.35	10501161.24	1346+05	1341507.55	10504890.57	1383+99	1340569.23	10508564.48
1272+01	1343406.20	10497772.19	1309+95	1342235.38	10501355.19	1347+99	1341469.95	10505081.74	1386+01	1340485.13	10508747.89
1274+06	1343310.65	10497952.94	1311+96	1342188.52	10501550.56	1349+89	1341430.27	10505266.97	1388+02	1340405.27	10508932.98
1276+00	1343222.10	10498126.07	1314+01	1342147.60	10501751.53	1351+99	1341383.39	10505472.06	1389+95	1340323.99	10509109.10
1277+99	1343134.05	10498304.14	1315+99	1342101.40	10501944.41	1353+96	1341342.89	10505664.49	1391+96	1340227.66	10509287.84
1279+98	1343048.65	10498483.42	1317+91	1342069.63	10502133.58	1356+01	1341305.10	10505866.47	1393+93	1340135.43	10509459.55
1282+02	1342965.66	10498669.01	1319+97	1342022.72	10502334.72	1357+99	1341276.92	10506062.87	1396+00	1340031.99	10509639.86
1284+06	1342885.52	10498856.05	1321+95	1341981.71	10502528.44	1360+04	1341235.85	10506263.23	1398+06	1339927.04	10509817.26
1286+03	1342823.58	10499044.04	1323+95	1341943.18	10502724.54	1361+99	1341202.97	10506456.09	1400+00	1339832.80	10509986.02

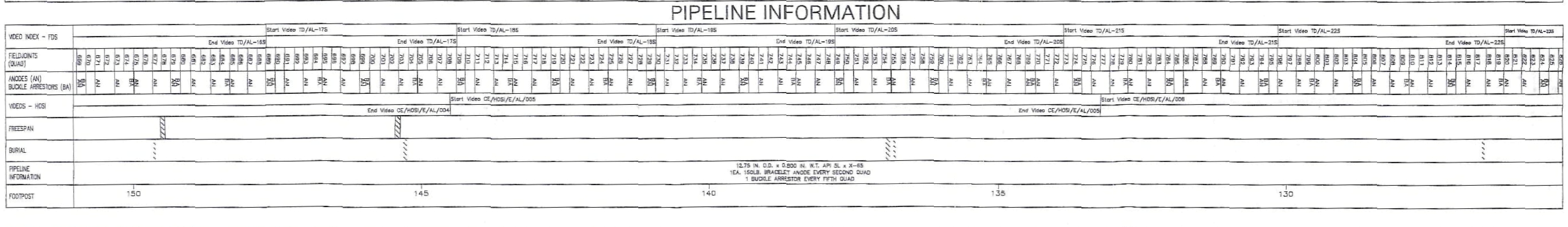
STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1402+07	1339731.98	10510166.77	1440+03	1337885.75	10513483.98	1478+00	1336009.25	10516785.38
1404+02	1339635.20	10510337.10	1442+00	1337788.11	10513655.02	1479+98	1335914.09	10516958.98
1406+01	1339527.05	10510504.47	1444+02	1337683.77	10513828.06	1481+95	1335822.72	10517133.38
1408+02	1339432.87	10510681.96	1445+98	1337581.55	10513995.76	1484+01	1335720.48	10517312.47
1410+02	1339345.16	10510862.00	1448+02	1337482.90	10514174.74	1485+96	1335624.52	10517482.02
1412+01	1339249.00	10511036.52	1449+99	1337372.89	10514337.98	1488+02	1335524.80	10517661.66
1414+00	1339155.68	10511211.64	1451+97	1337273.58	10514509.97	1490+02	1335425.42	10517835.42
1416+00	1339065.04	10511389.83	1454+01	1337172.21	10514687.13	1491+96	1335332.54	10518006.07
1417+99	1338971.60	10511565.75	1456+05	1337076.07	10514866.55	1494+12	1335223.04	10518192.26
1420+04	1338865.79	10511741.33	1457+97	1336982.36	10515034.70	1495+93	1335130.92	10518348.06
1421+99	1338778.36	10511916.60	1459+96	1336886.26	10515208.08	1497+97	1335038.38	10518530.08
1423+96	1338687.87	10512091.96	1462+00	1336790.11	10515388.48	1500+01	1334946.88	10518713.04
1426+04	1338585.30	10512272.74	1464+01	1336699.28	10515568.23	1502+02	1334849.90	10518888.39
1427+97	1338486.42	10512438.25	1466+00	1336603.87	10515742.68	1503+97	1334752.86	10519058.04
1429+92	1338388.78	10512607.51	1468+04	1336501.59	10515919.29	1506+09	1334654.12	10519245.98
1431+99	1338288.34	10512788.49	1470+00	1336401.47	10516088.04	1507+99	1334554.46	10519407.46
1433+98	1338194.75	10512963.66	1471+99	1336302.17	10516260.02	1510+00	1334449.51	10519579.31
1435+95	1338100.61	10513136.98	1474+02	1336205.06	10516438.40	1511+99	1334353.78	10519754.15
1438+05	1337989.97	10513314.99	1476+02	1336107.00	10516612.60	1514+01	1334249.02	10519926.43

STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING	STATION	UTM ZONE 16 N PROJECTION (USFT) EASTING	NORTHING
1516+01	1334149.94	10520100.27									
1517+89	1334055.09	10520262.93									
1520+00	1333949.21	10520444.68									
1521+96	1333850.21	10520614.85									

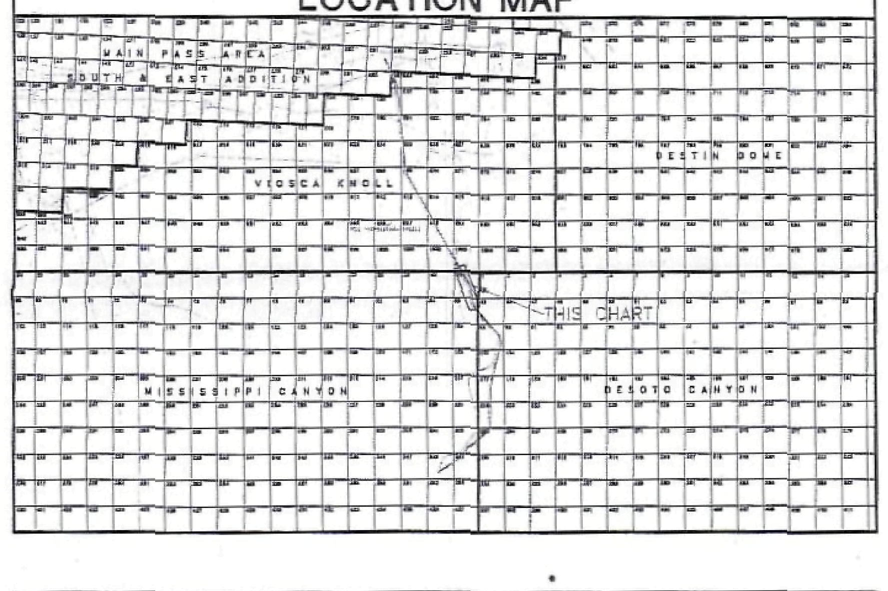
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/– 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS–G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS–LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA

Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

NAVIGATION SYSTEMS

Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek

Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = –151.0 meters
dz = –175.0 meters

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express

Operated by TotalFinaElf E&P USA Inc.

Eni Saipem Inc.

Sai CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.

CHART 07 OF 12

Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713–784–4482 Fax: 713–784–8162

THALES

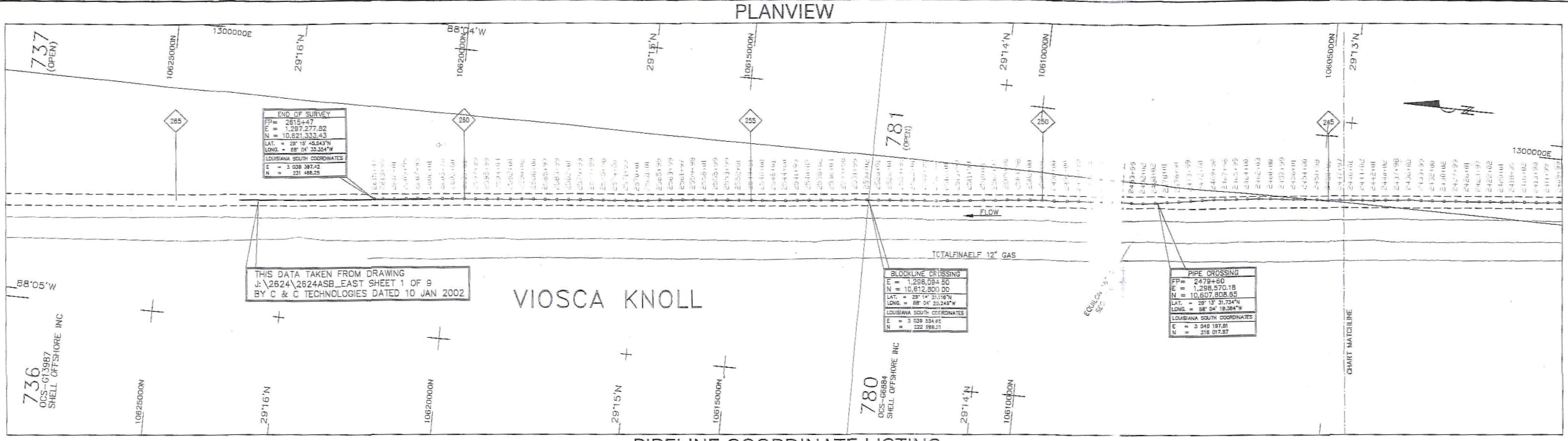
HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS–BUILT

	Date of Survey : JAN–NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769–0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL–07

PLANVIEW



PIPELINE COORDINATE LISTING

UTM ZONE 16 N PROJECTION (USFT)

STATION	EASTING	NORTHING
2409+99	1299259.33	10600881.31
2411+99	1299237.41	10601080.61
2413+98	1299215.66	10601278.11
2416+02	1299198.75	10601481.79
2418+05	1299180.45	10601683.91
2420+01	1299158.47	10601878.14
2422+02	1299142.91	10602078.46
2423+97	1299124.13	10602272.78
2426+01	1299105.40	10602476.04
2427+99	1299091.74	10602673.54
2430+02	1299073.52	10602875.62
2432+00	1299057.68	10603073.71
2433+99	1299044.91	10603271.91
2436+02	1299035.22	10603475.45
2437+98	1299010.28	10603669.30
2440+02	1298991.04	10603873.02
2442+01	1298967.12	10604069.87
2444+02	1298949.78	10604270.15
2446+01	1298930.70	10604468.28

STATION	EASTING	NORTHING
2447+97	1298911.82	10604664.09
2450+01	1298899.99	10604867.50
2451+98	1298886.47	10605063.83
2454+00	1298872.01	10605265.38
2456+01	1298854.73	10605465.81
2457+99	1298840.78	10605663.51
2460+00	1298826.45	10605863.94
2462+03	1298811.67	10606066.38
2464+00	1298786.74	10606262.28
2465+99	1298764.32	10606460.16
2467+96	1298745.93	10606656.28
2469+92	1298730.07	10606851.00
2472+00	1298704.44	10607057.69
2473+99	1298674.75	10607254.56
2476+00	1298639.67	10607453.16
2478+01	1298604.53	10607651.74
2480+02	1298563.51	10607849.40
2482+02	1298542.68	10608048.76
2483+99	1298529.71	10608245.97

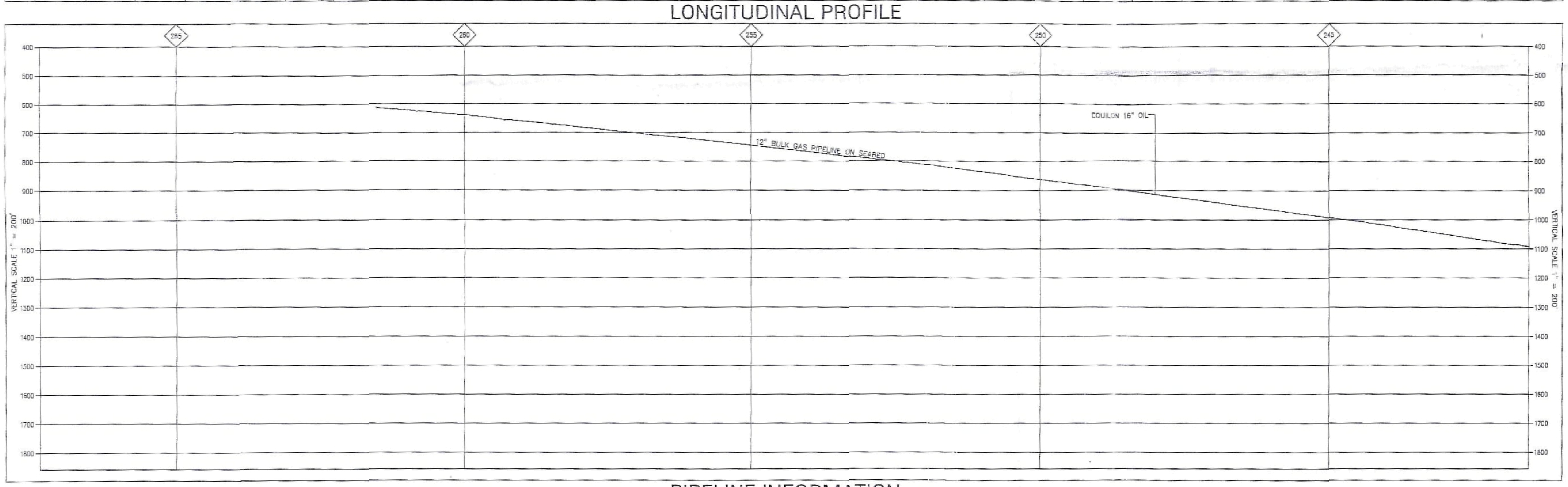
STATION	EASTING	NORTHING
2486+01	1298521.93	10608447.70
2487+99	1298512.47	10608645.90
2489+98	1298492.80	10608843.82
2492+02	1298474.90	10609046.85
2493+99	1298456.09	10609242.61
2496+00	1298435.29	10609442.64
2498+00	1298409.54	10609641.85
2500+00	1298397.94	10609840.95
2502+00	1298375.78	10610039.71
2503+98	1298358.93	10610237.71
2505+98	1298337.73	10610436.28
2507+97	1298310.02	10610633.80
2510+01	1298292.37	10610837.16
2511+99	1298270.47	10611033.03
2513+99	1298246.93	10611232.17
2516+01	1298223.63	10611432.81
2518+01	1298201.42	10611631.11
2519+99	1298184.68	10611828.90
2522+01	1298165.39	10612029.61

STATION	EASTING	NORTHING
2523+99	1298146.79	10612227.16
2526+01	1298128.09	10612428.29
2528+01	1298107.24	10612627.10
2530+02	1298092.30	10612827.41
2531+99	1298079.44	10613024.49
2533+98	1298056.40	10613222.01
2536+04	1298035.28	10613426.67
2538+02	1298017.04	10613623.70
2540+02	1297997.38	10613822.98
2541+99	1297975.68	10614019.06
2544+00	1297954.74	10614218.61
2546+01	1297933.79	10614419.27
2548+00	1297917.56	10614616.97
2549+91	1297901.11	10614807.44
2552+01	1297880.67	10615016.50
2553+99	1297864.31	10615213.85
2555+99	1297846.09	10615413.32
2558+01	1297827.71	10615614.60
2559+98	1297810.92	10615810.58

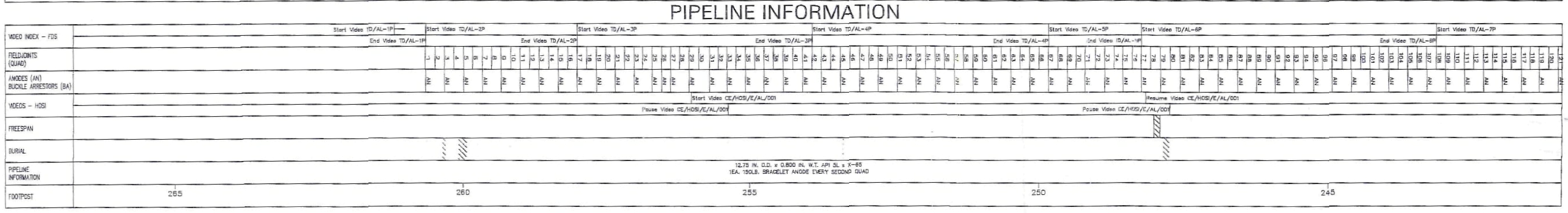
STATION	EASTING	NORTHING
2561+97	1297789.95	10616008.05
2563+99	1297771.88	10616209.04
2565+99	1297752.94	10616408.72
2568+01	1297725.31	10616608.38
2570+01	1297701.70	10616807.36
2571+99	1297683.31	10617005.14
2574+00	1297662.62	10617204.61
2575+98	1297647.01	10617402.03
2577+99	1297631.17	10617602.11
2579+99	1297609.95	10617801.77
2582+01	1297592.45	10618002.21
2583+99	1297572.53	10618199.57
2585+97	1297557.50	10618397.22
2588+00	1297540.62	10618599.50
2590+02	1297523.64	10618800.54
2592+00	1297503.60	10618997.52
2594+04	1297485.11	10619200.77
2595+99	1297464.01	10619395.09
2597+99	1297443.06	10619594.04

STATION	EASTING	NORTHING
2600+00	1297427.93	10619794.39
2602+00	1297410.30	10619993.11
2603+76	1297394.18	10620168.68
2606+01	1297374.13	10620392.27
2607+99	1297359.71	10620590.48
2609+99	1297335.28	10620788.98
2612+01	1297312.20	10620989.62
2613+99	1297293.67	10621186.28
2615+47	1297277.82	10621333.43

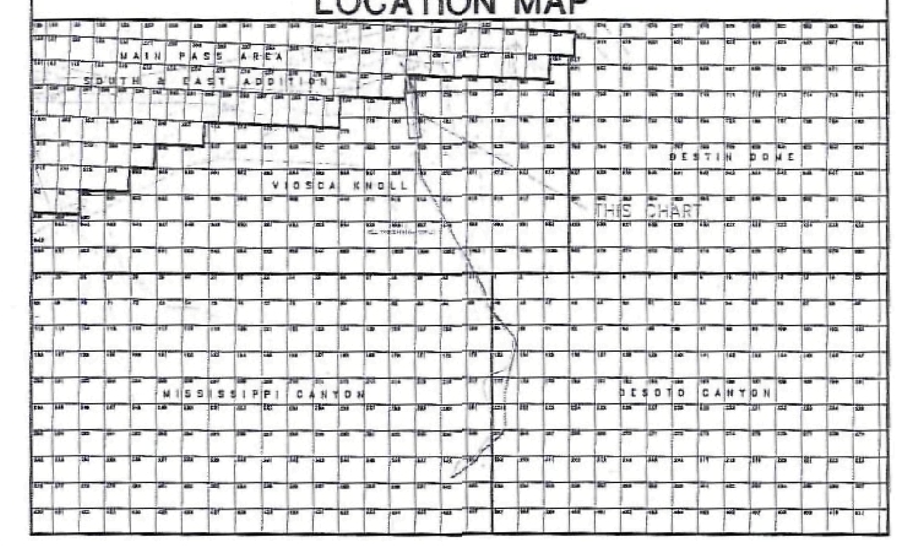
LONGITUDINAL PROFILE



PIPELINE INFORMATION



LOCATION MAP



LEGEND

	PLANVIEW	LONGITUDINAL PROFILE
110	DESIGN ROUTE FOOTPOST	MEAN SEABED (FSW)
	CORRIDOR +/- 100 FEET	
	BLOCK BOUNDARY	PIPELINE INFORMATION
45	BLOCK NUMBER	FDS = VIDEOS FROM SAIBOS FDS
OCS-G10441 BP EXPLORATION	BLOCK LEASE & OPERATOR	HOSI = VIDEOS FROM HOS INNOVATOR
	BLOCK AREA BOUNDARY	
998+79	STATION	

NOTES

1. THIS SERIES OF CHARTS COVER THE AS-LAID SURVEY FOR SEGMENT 13233 FROM STN 0+00 TO STN 2615+47. THE REMAINING PART OF THE SEGMENT FROM STN 2615+47 TO MAIN PASS 261 JP STRUCTURE WAS SURVEYED BY OTHERS

SURVEY POSITIONING

GEODETIC DATA
Datum : NAD27
Spheroid : Clarke 1866
Projection : UTM Zone 16N in US Survey Feet
Central Meridian : 87deg West
False Easting : 1640416.667
False Northing : 0.0

NAVIGATION SYSTEMS
Thales SkyFix, Micronet DGPS/MultiFix 2
SkyFix Stations Houston (500)
Tampa Bay (ID 520)
New Orleans (540)
Carmen (560)
Micronet Stations Creek
Data Transformation WGS84 to NAD 27 with JECA Central:
dx = +7.0 meters
dy = −151.0 meters
dz = −175.0 meters

Vessels : SaiBOS FDS & HOS Innovator
ROV Positioning with Sonardyne LUSBL Positioning System

CERTIFICATION

I HEREBY CERTIFY THAT THE HORIZONTAL LOCATION OF THE PIPELINE IS CORRECT

STATE OF LOUISIANA
DALE H. LIPPS
REG. No. 0307
REGISTERED PROFESSIONAL LAND SURVEYOR

DALE H. LIPPS LA. REG. NO. 307 DATE 1/30/03

Canyon Express
Operated by TotalFinaElf E&P USA Inc.

Saipem Inc.

Sai
CONSTRUÇÕES MARITIMAS, LDA.

CANYON EXPRESS PROJECT
EAST AND WEST FLOWLINES

AS-LAID 12" BULK GAS (EAST) PIPELINE SURVEY
MISSISSIPPI CANYON BLOCK 348 WELL No. 1 EAST SLED TO VIOSCA KNOLL BLOCK 736 END OF PIPE
SEGMENT No. 13233 SURVEYED LENGTH 259,309 FT.
CHART 12 OF 12

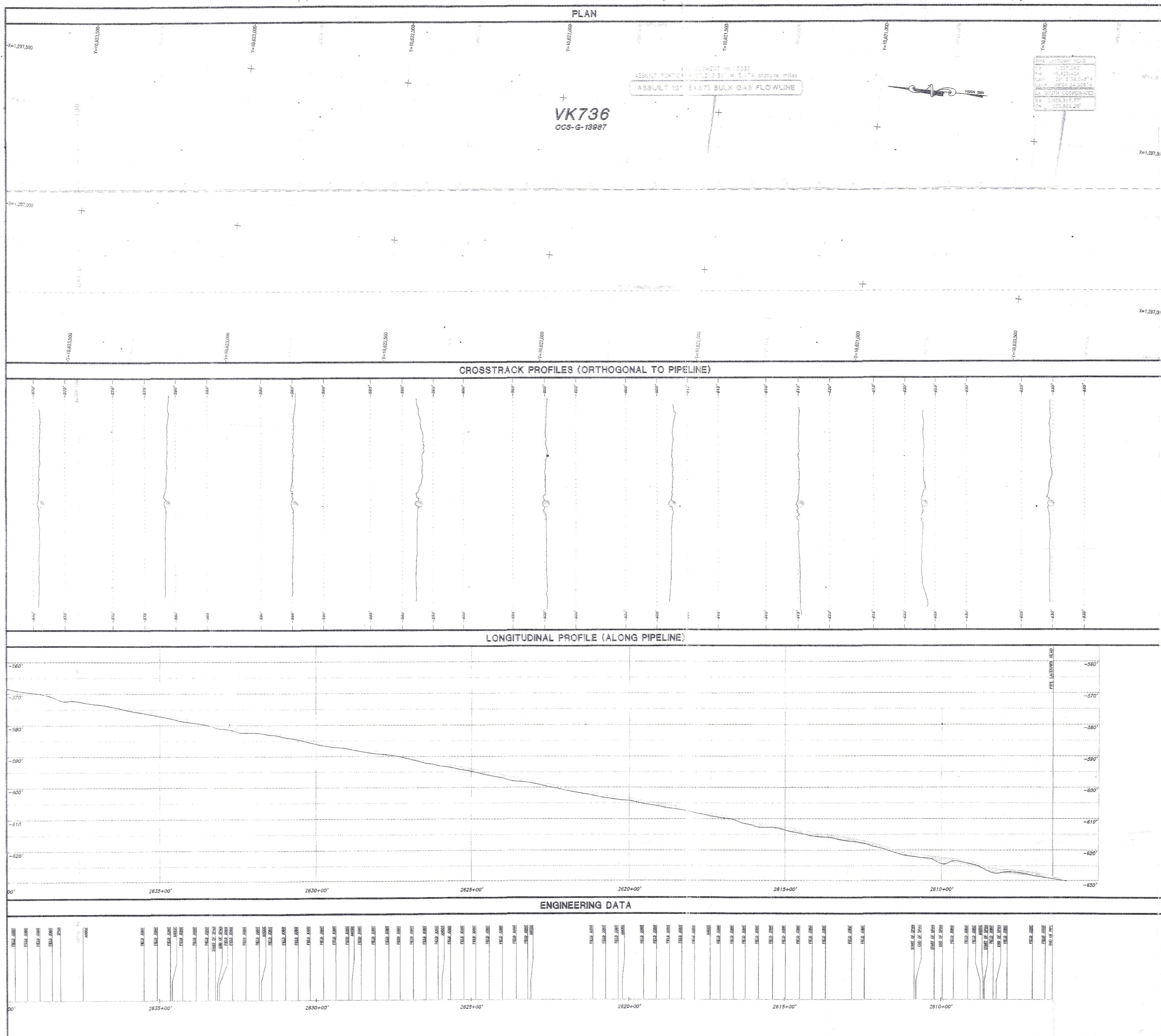
Thales GeoSolutions, Inc.
3624 Westchase Drive
Houston, Texas 77042
Tel: 713-784-4482 Fax: 713-784-8162
THALES

HORIZONTAL SCALE 1" : 1000'

2000 0 2000 4000 Feet

Rev. No.	Date	By	Checked	Approved	Description
	NOV 2002	CB	KW	DL	FOR CLIENT REVIEW
00	JAN 2003	CB	KW	DL	FINAL AS-BUILT

	Date of Survey : JAN-NOV 2002
Drawn By : C BOWEN	Date Drawn : NOV 2002
Checked By : K WILLIAMS	Racal Prj/DP No : 2769-0834/4535
Approved By : D LIPPS	Racal Dwg No : EAST/4535/AL-12



PLAN VIEW

Asbuilt 12" East Flowline

Centerline of proposed 12" East Flowline

Foreign pipeline

Permitted or proposed foreign pipeline

12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

12" East Flowline

Seafloor profile orthogonal to pipeline

VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

12" East Flowline

Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

1. ALL FIELD DATA WAS ACQUIRED OCT. 24 – DEC. 5, 2001 ABOARD THE M/V HOS INNOVATOR WITH THE ROV INNOVATOR 9.
2. POSITION OF PIPELINE IN CROSSTRACK AND LONGITUDINAL PROFILE VIEWS IS BY INTERPRETATION OF BATHYMETRY DATA AND MAY NOT DEPICT THE ACTUAL LOCATION OF THE PIPELINE RELATIVE TO THE SEAFLOOR.
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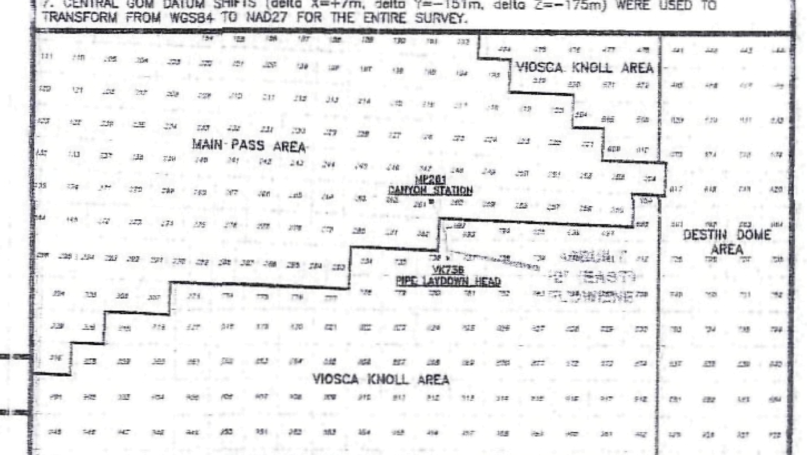
4. ENGINEERING DATA ANNOTATED ONLY WITH ITEMS VISIBLE TO THE ROV OPERATOR.
5. ALL STATIONING IS REFERENCED TO THE PROPOSED ALIGNMENT.
6. THIS MAP WAS PRODUCED FOR SONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=-151m, delta Z=-175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.



TOTALFINAELF

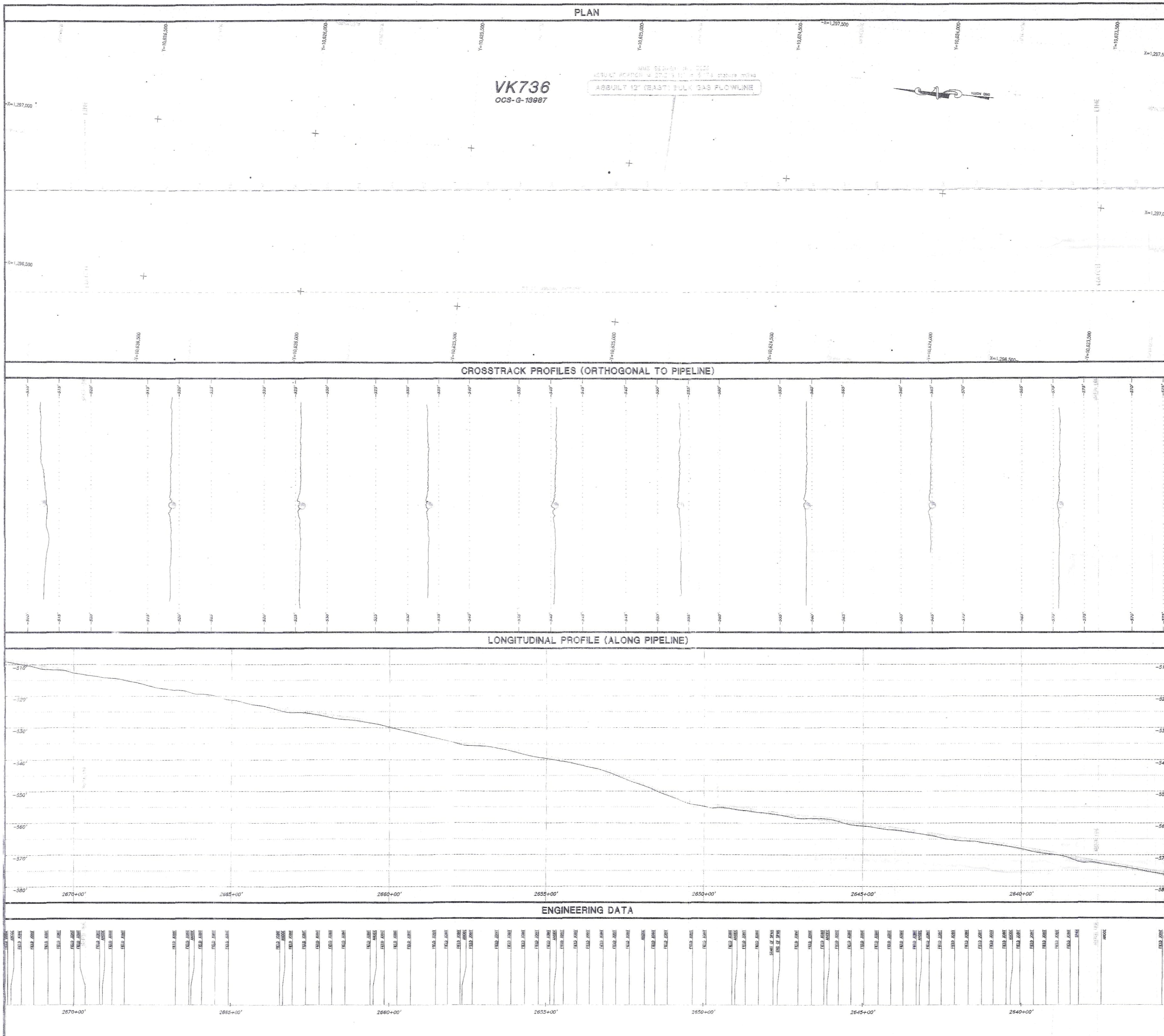
ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"
BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin																

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

JOB NO. 2624	DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG	

SHEET 1 of 9



PLAN VIEW

Asbuilt 12" East Flowline

Centerline of proposed 12" East Flowline

Foreign pipeline

Permitted or proposed foreign pipeline

12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

12" East Flowline

Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

12" East Flowline

Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

1. ALL FIELD DATA WAS ACQUIRED OCT. 24 - DEC. 5, 2001 ABOARD THE M/V HOS INNOVATOR WITH THE ROV INNOVATOR 9.
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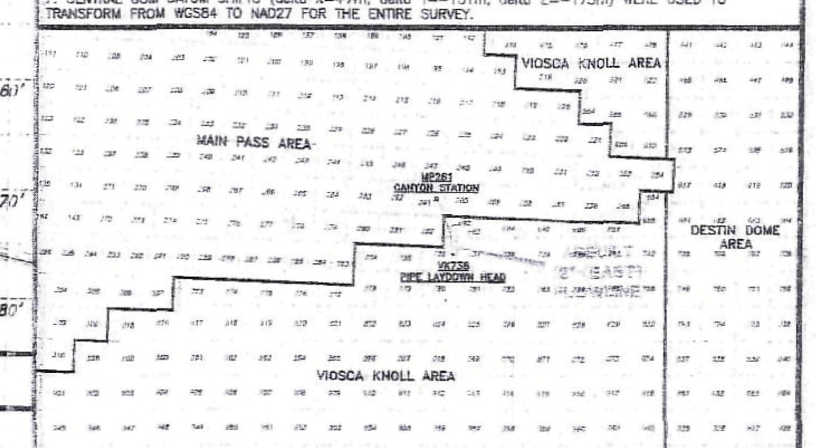
5. ALL STATIONING IS REFERENCED TO THE PROPOSED ALIGNMENT.
6. THIS MAP WAS PRODUCED FOR SONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=-151m, delta Z=-175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.



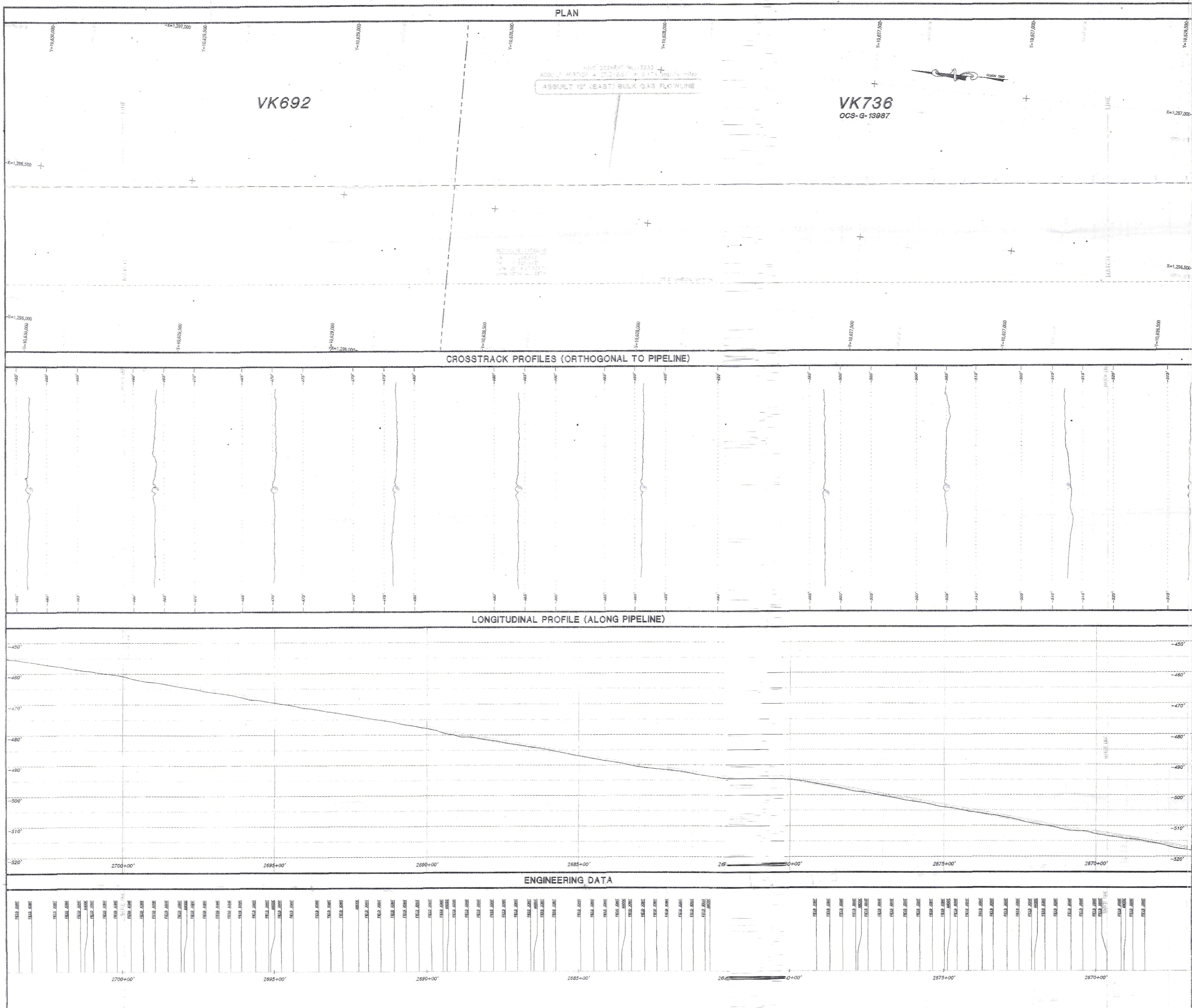
TOTALFINAELF

ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"
BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Dupiechin		

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

JOB NO. 2624	DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG	
SHEET 2 of 9	



PLAN VIEW

Asbuilt 12" East Flowline

Centerline of proposed 12" East Flowline

Foreign pipeline

Permitted or proposed foreign pipeline

12" West Flowline

100' 0' 100' 200'
SCALE IN FEET

COORDINATE TABLE

POINT	X COORDINATE	Y COORDINATE	POINT	X COORDINATE	Y COORDINATE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CERTIFIED CORRECT AS TO HORIZONTAL POSITION

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

12" East Flowline

Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

12" East Flowline

Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

1. ALL FIELD DATA WAS ACQUIRED OCT. 24 – DEC. 5, 2001 ABOARD THE M/V HOS INNOVATOR WITH THE ROV INNOVATOR 9.
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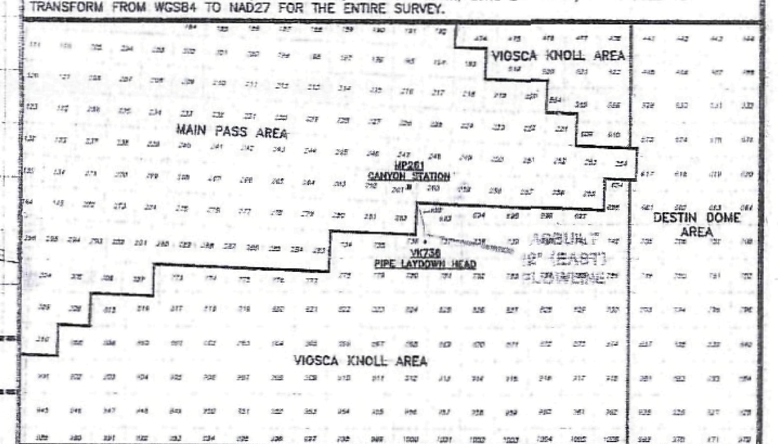
6. THIS MAP WAS PRODUCED FOR CONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=-151m, delta Z=-175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.



TOTALFINAELF

ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"
BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

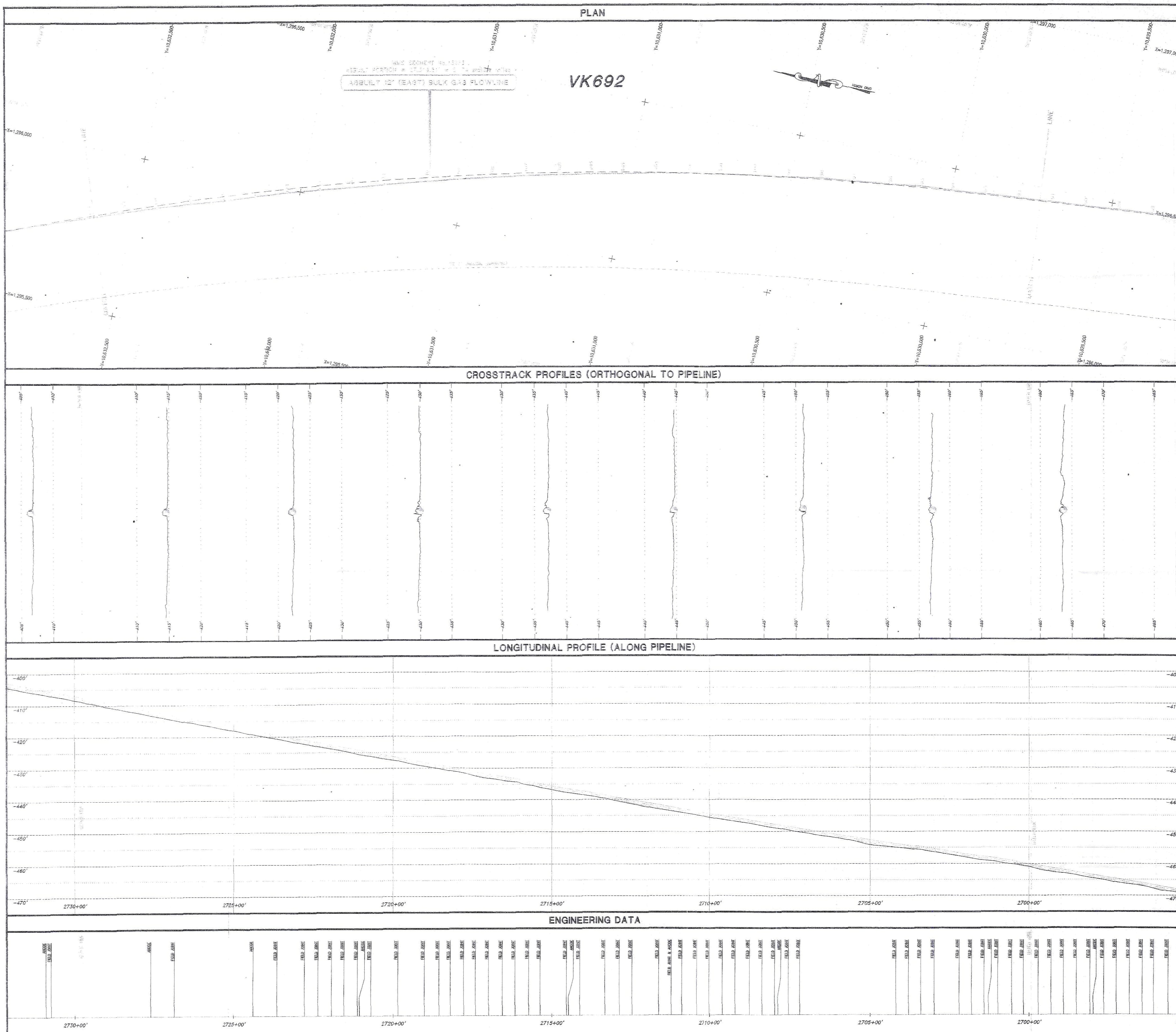
ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin																

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

C&C Technologies

JOB NO. 2624	DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG	

SHEET 3 of 9



PLAN VIEW

- Asbuilt 12" East Flowline
- Centerline of proposed 12" East Flowline
- Foreign pipeline
- Permitted or proposed foreign pipeline
- 12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF ASBUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

- 12" East Flowline
- Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE:
VERTICAL SCALE:
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

- 12" East Flowline
- Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

1. ALL FIELD DATA WAS ACQUIRED OCT. 24 – DEC. 5, 2001 ABOARD THE M/V HOS INNOVATOR WITH THE ROV INNOVATOR 9.
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5. ALL STATIONING IS REFERENCED TO THE PROPOSED ALIGNMENT.
6. ~~THIS MAP WAS PRODUCED FOR SONSUB.~~
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=-151m, delta Z=-175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.

ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin		

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

TOTALFINAELF

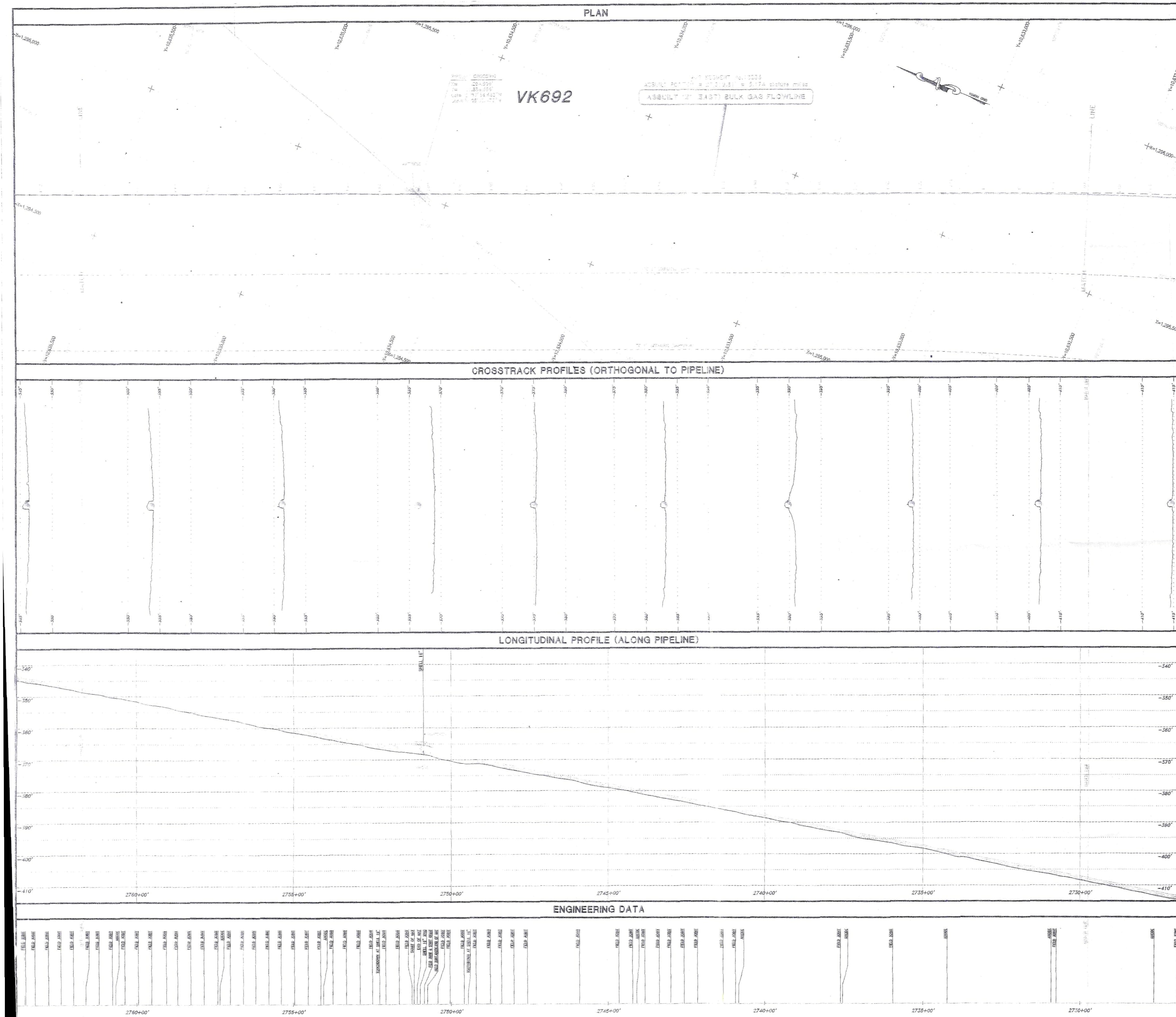
ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"

BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

C&C Technologies SURVEY SERVICES

JOB NO. 2624 | DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG

SHEET 4 of 9



PLAN VIEW

- Asbuilt 12" East Flowline
- Centerline of proposed 12" East Flowline
- Foreign pipeline
- Permitted or proposed foreign pipeline
- 12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF ASBUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

- 12" East Flowline
- Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

- 12" East Flowline
- Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

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5. ALL STATIONING IS REFERENCED TO THE PROPOSED ALIGNMENT.
6. THIS MAP WAS PRODUCED FOR SONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=−151m, delta Z=−175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.

VIOSCA KNOLL AREA
MAIN PASS AREA
MP261 CANYON STATION
DESTIN DOME AREA

TOTALFINAELF

ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"
BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

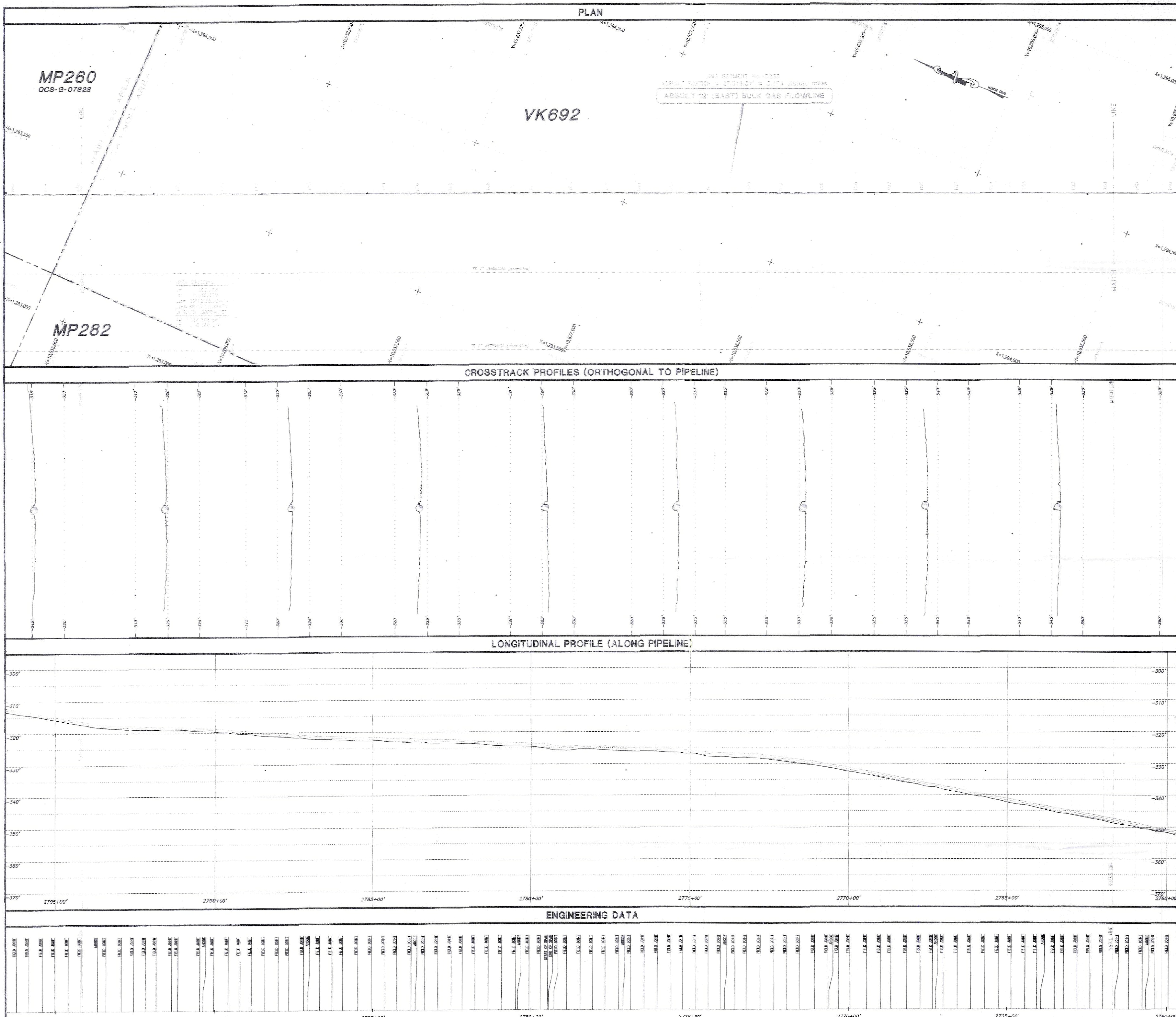
ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin		
2	02/20/2002	Corrections to pipeline label in longitudinal profile view		J. Duplechin		

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

C&C Technologies

JOB NO. 2624 | DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG

SHEET 5 of 9



PLAN VIEW

- Asbuilt 12" East Flowline
- Centerline of proposed 12" East Flowline
- Foreign pipeline
- Permitted or proposed foreign pipeline
- 12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

- 12" East Flowline
- Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

- 12" East Flowline
- Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

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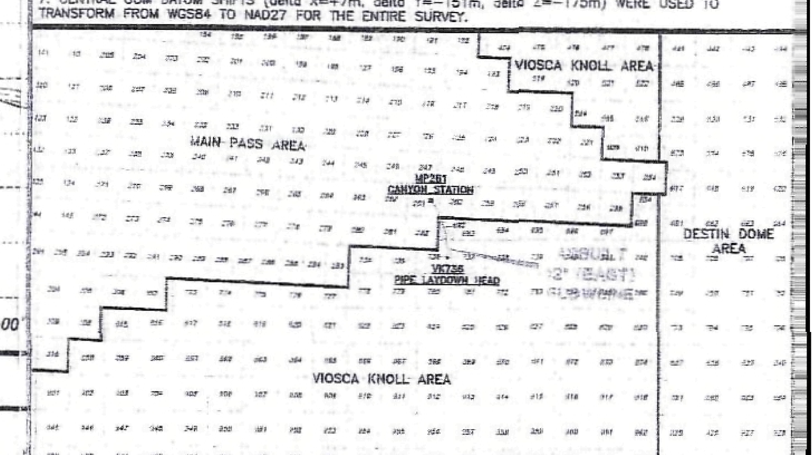
6. THIS MAP WAS PRODUCED FOR SONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=−151m, delta Z=−175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.



ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin																

GEODETIC DATUM: NAD27
ELLIPSOID: CLARKE 1866
GRID UNITS: U.S. SURVEY FEET
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
ZONE: 16N
CENTRAL MERIDIAN: 87° 00' W
FALSE EASTING: 1,640,416.67 ft. at C.M.
FALSE NORTHING: 0.00 ft. at 00° 00' N

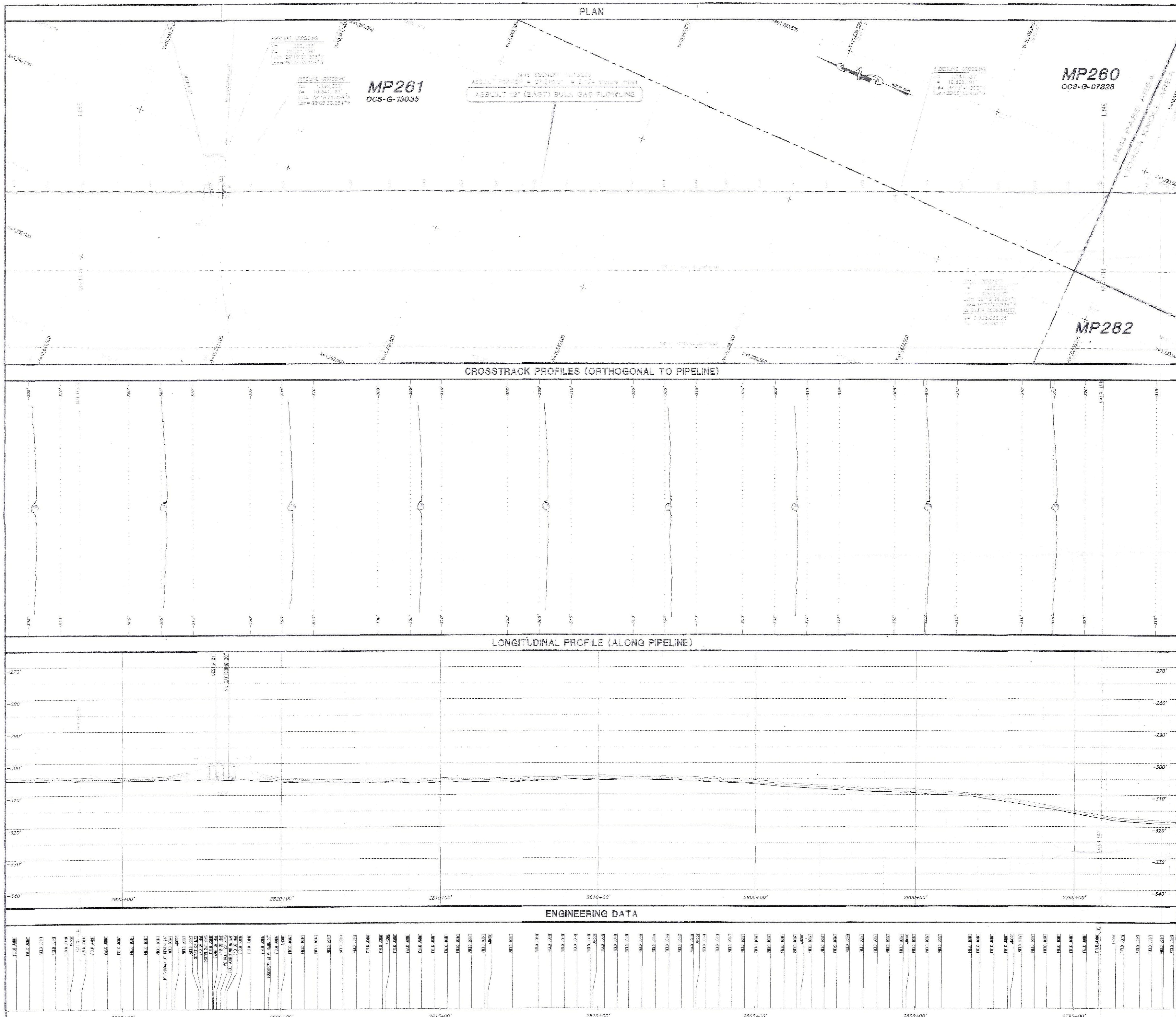
TOTALFINAELF

ASBUILT
12" (EAST) BULK GAS FLOWLINE
A PORTION of MMS SEGMENT No. 13233
"CANYON EXPRESS"

BLOCK 736, VIOSCA KNOLL AREA
to
BLOCK 261, MAIN PASS AREA
GULF of MEXICO

C&C Technologies SURVEY SERVICES

JOB NO. 2624 | DATE: 01/10/2002
FILENAME: J:\2624\2624ASB_EAST.DWG



PLAN VIEW

Asbuilt 12" East Flowline

Centerline of proposed 12" East Flowline

Foreign pipeline

Permitted or proposed foreign pipeline

12" West Flowline

100' 0' 100' 200'
SCALE IN FEET

COORDINATE TABLE

POINT	X COORDINATE	Y COORDINATE	POINT	X COORDINATE	Y COORDINATE
177	1,293,425'	10,638,487'	194	1,292,760'	10,640,158'
178	1,293,391'	10,638,592'	195	1,292,721'	10,640,252'
179	1,293,347'	10,638,695'	196	1,292,678'	10,640,354'
180	1,293,308'	10,638,795'	197	1,292,636'	10,640,454'
181	1,293,265'	[illegible]	198	1,292,591'	10,640,579'
182	1,293,224'	[illegible]	199	[illegible]	[illegible]
183	1,293,182'	[illegible]	200	1,292,508'	10,640,787'
184	1,293,144'	10,639,206'	201	1,292,468'	10,640,964'
185	1,293,108'	10,639,295'	202	[illegible]	10,641,381'
186	1,293,064'	10,639,403'	203	[illegible]	[illegible]
187	1,293,027'	10,639,498'	204	1,292,359'	10,641,189'
188	1,292,983'	10,639,592'	205	1,292,305'	10,641,285'
189	1,292,946'	10,639,689'	206	1,292,157'	10,641,376'
190	1,292,910'	10,639,781'	207	1,292,228'	10,641,475'
191	1,292,873'	10,639,875'	208	1,292,180'	[illegible]
192	1,292,836'	10,639,970'	209	1,292,148'	10,641,674'
193	1,292,797'	10,640,064'	210	1,292,109'	10,641,766'

STATE OF LOUISIANA
RALPH A. COLEMAN
REG. No. 4691

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

12" East Flowline

Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

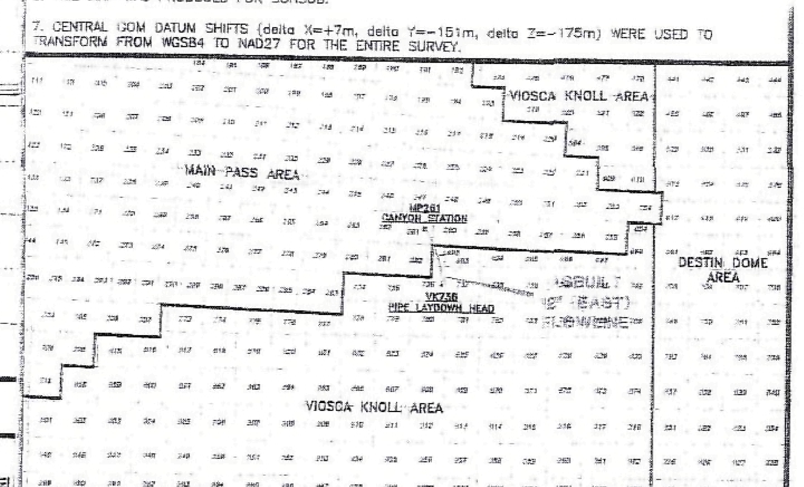
12" East Flowline

Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

1. ALL FIELD DATA WAS ACQUIRED OCT. 24 – DEC. 5, 2001 ABOARD THE M/V HOS INNOVATOR WITH THE ROV INNOVATOR 9.
2. POSITION OF PIPELINE IN CROSSTRACK AND LONGITUDINAL PROFILE VIEWS IS BY INTERPRETATION OF BATHYMETRY DATA AND MAY NOT DEPICT THE ACTUAL LOCATION OF THE PIPELINE RELATIVE TO THE SEAFLOOR.
3. LONGITUDINAL PROFILE OF SEAFLOOR IS CALCULATED FROM THE MEAN DEPTH VALUES APPROXIMATELY FIVE METERS EITHER SIDE OF PIPELINE.
4. ENGINEERING DATA ANNOTATED ONLY WITH ITEMS VISIBLE TO THE ROV OPERATOR.
5. ALL STATIONING IS REFERENCED TO THE PROPOSED ALIGNMENT.
6. THIS MAP WAS PRODUCED FOR SONSUB.
7. CENTRAL GOM DATUM SHIFTS (delta X=+7m, delta Y=-151m, delta Z=-175m) WERE USED TO TRANSFORM FROM WGS84 TO NAD27 FOR THE ENTIRE SURVEY.



ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED	ISSUE	DATE	DESCRIPTION	INTERP	DRAWN	CHECKED	APPROVED
1	01/10/2002	Issue for review.		J. Duplechin																

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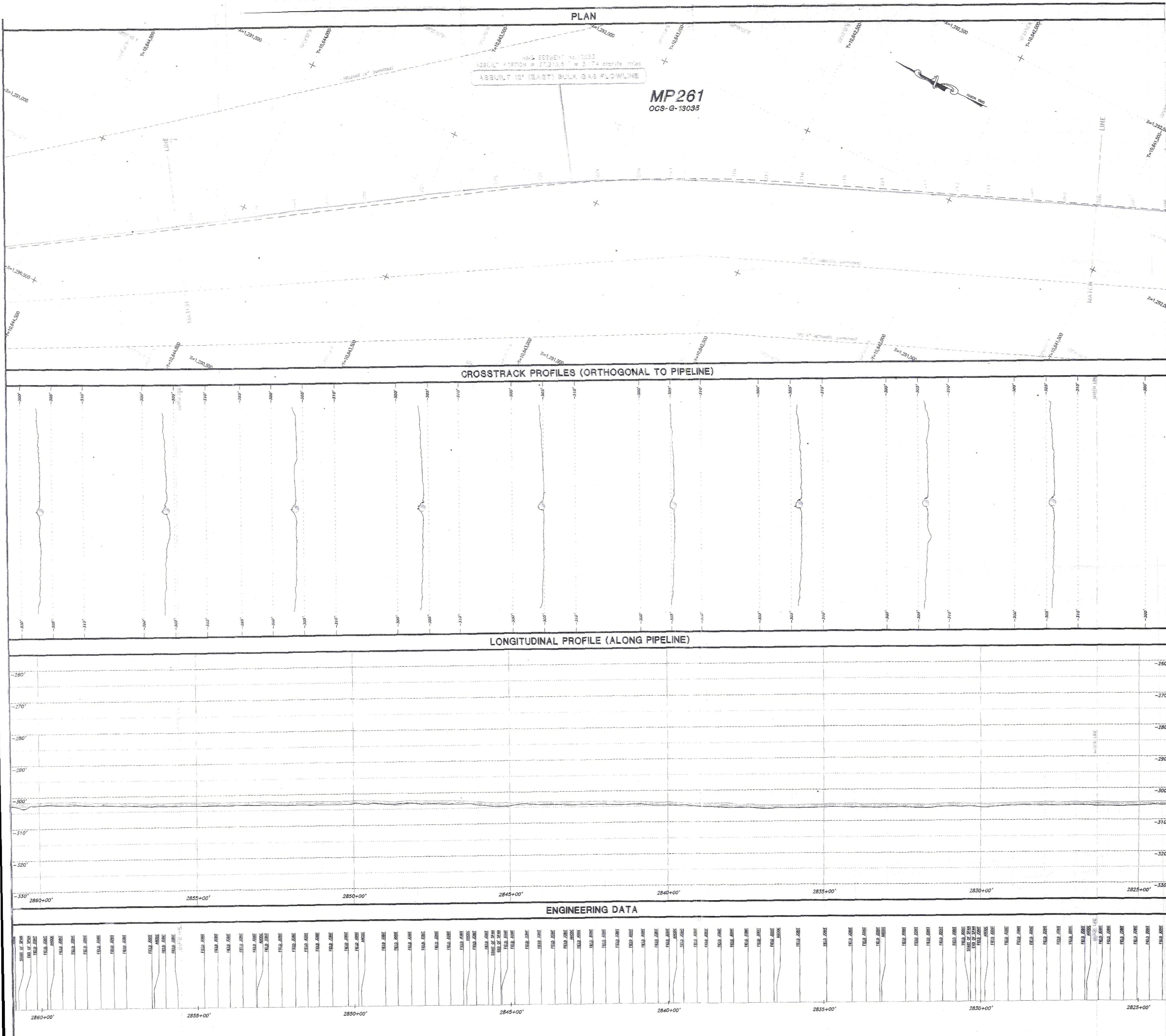
SHEET 7 of 9



PLAN VIEW

- Asbuilt 12" East Flowline
- Centerline of proposed 12" East Flowline
- Foreign pipeline
- Permitted or proposed foreign pipeline
- 12" West Flowline

SCALE IN FEET

COORDINATE TABLE

POINT	X COORDINATE	Y COORDINATE	POINT	X COORDINATE	Y COORDINATE
206	1,292,267'	10,641,378'	222	1,291,478'	10,643,187'
207	1,292,229'	10,641,473'	223	1,291,411'	10,643,299'
208	1,292,190'	10,641,571'	224	1,291,350'	10,643,400'
209	1,292,148'	10,641,674'	225	1,291,282'	10,643,508'
210	1,292,109'	10,641,766'	226	1,291,182'	10,643,659'
211	1,292,059'	10,641,892'	227	[illegible]	10,643,760'
212	1,292,021'	10,641,985'	228	[illegible]	10,643,849'
213	1,291,982'	10,642,082'	229	1,290,984'	[illegible]
214	1,291,929'	[illegible]	230	[illegible]	[illegible]
215	1,291,885'	[illegible]	231	1,290,879'	[illegible]
216	1,291,834'	10,642,441'	232	1,290,821'	[illegible]
217	1,291,795'	10,642,540'	233	1,290,767'	10,644,306'
218	1,291,734'	10,642,634'	234	1,290,702'	10,644,402'
219	[illegible]	[illegible]	235	1,290,634'	10,644,508'
220	1,291,625'	10,642,912'	236	1,290,578'	10,644,594'
221	1,291,566'	10,643,029'			

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

RALPH A. COLEMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION No. 4691

CROSSTRACK PROFILE VIEW

- 12" East Flowline
- Seafloor profile orthogonal to pipeline

HORIZONTAL SCALE: 0' 5' 10'
VERTICAL SCALE: 0' 5' 10'
VERTICAL EXAGGERATION = 1

LONGITUDINAL PROFILE VIEW

- 12" East Flowline
- Seafloor profile along pipeline

HORIZONTAL SCALE: 0' 100' 200'
VERTICAL SCALE: 0' 10' 20'
VERTICAL EXAGGERATION = 10

NOTES:

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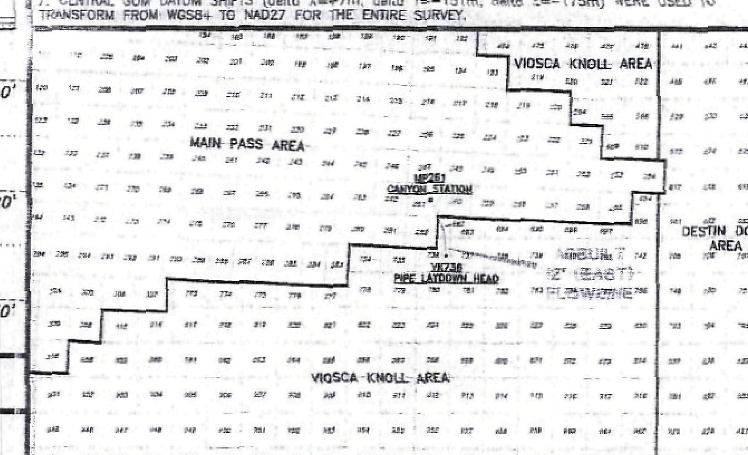

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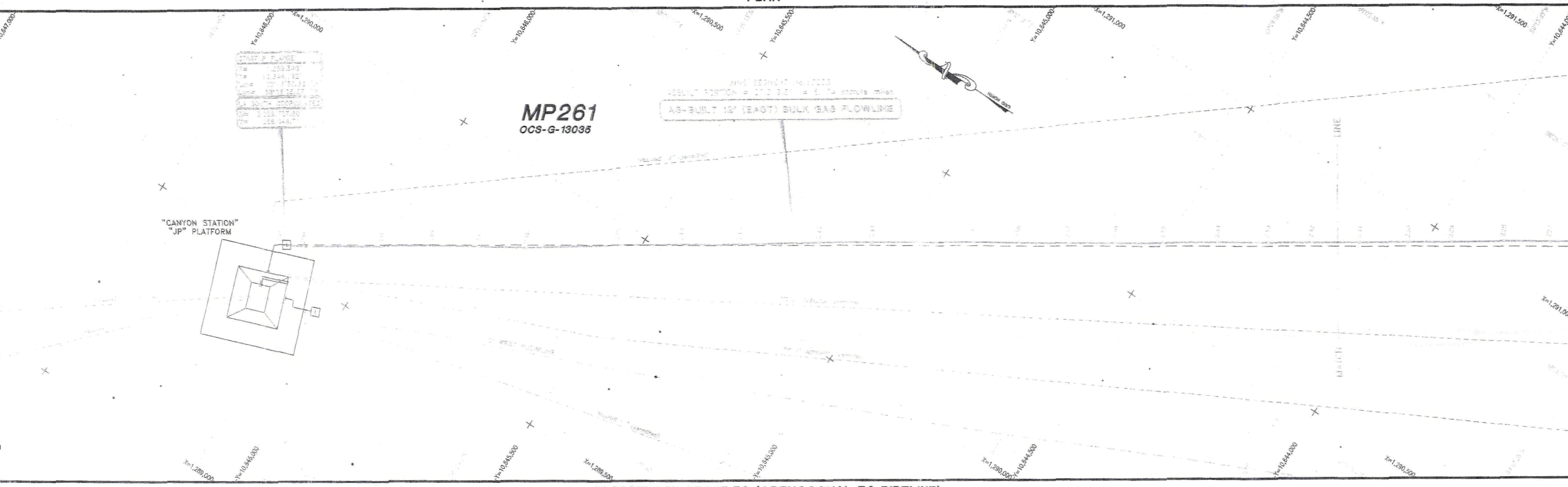
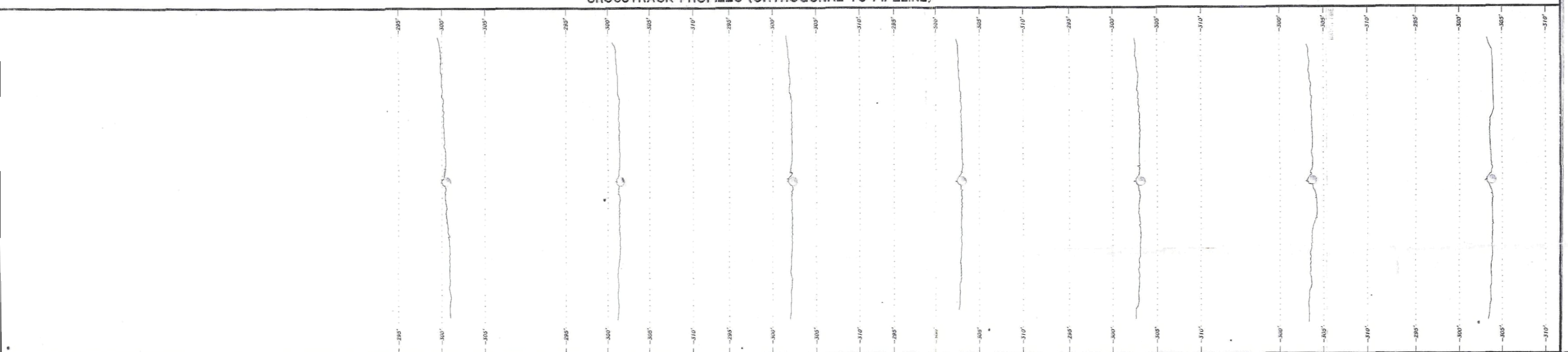
SHEET 8 of 9

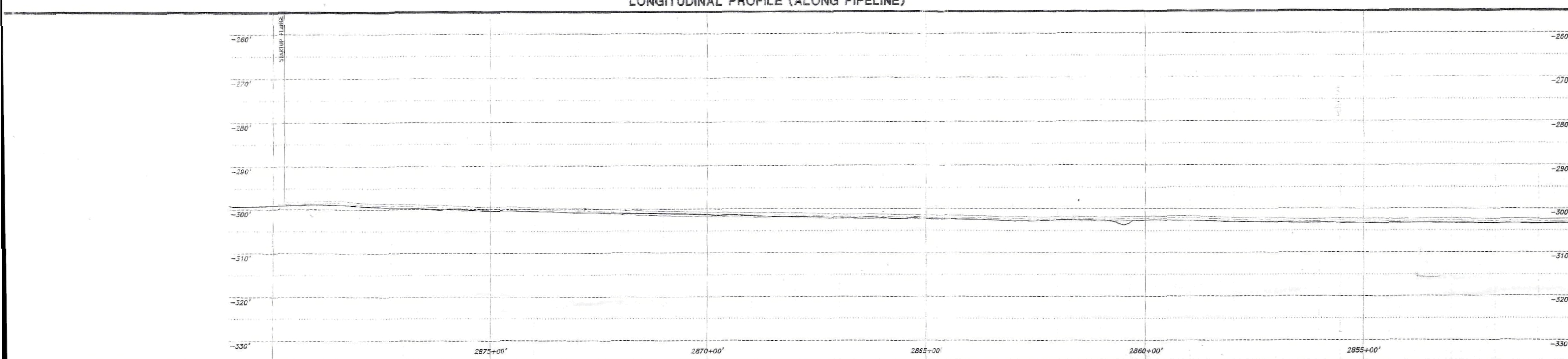
PLAN



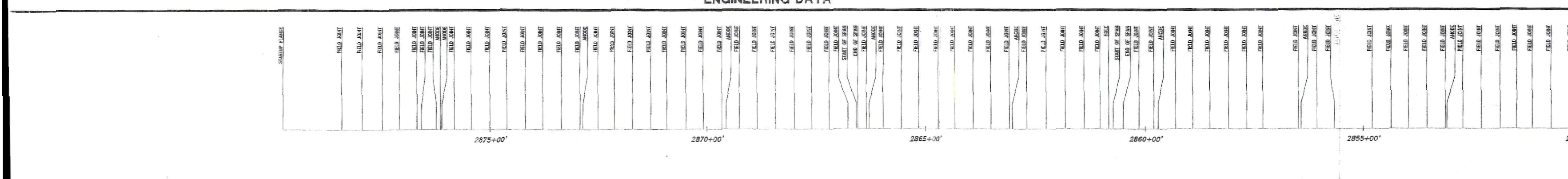
CROSSTRACK PROFILES (ORTHOGONAL TO PIPELINE)



LONGITUDINAL PROFILE (ALONG PIPELINE)



ENGINEERING DATA



PLAN VIEW

Asbuilt 12" East Flowline

Centerline of proposed 12" East Flowline

Foreign pipeline

Permitted or proposed foreign pipeline

12" West Flowline

COORDINATE TABLE

CERTIFIED CORRECT AS TO HORIZONTAL POSITION OF AS-BUILT PIPELINE.

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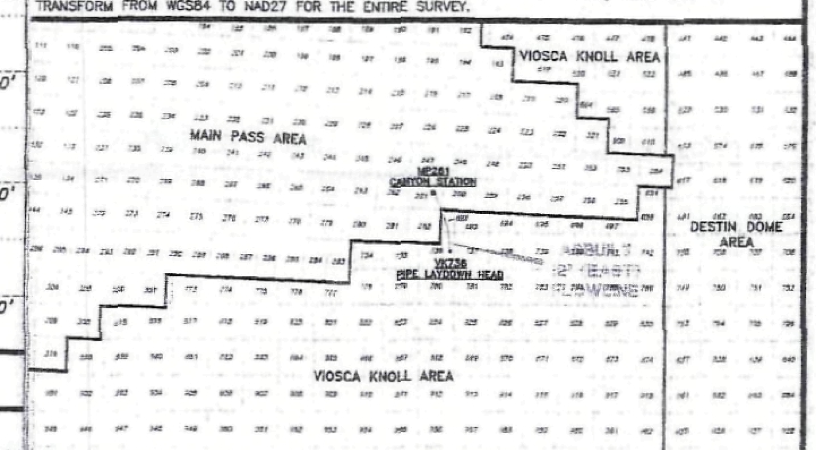

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