

CONFIDENTIAL

RELEASED

ORIGINAL

NOV 13 1991

SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

API NO. 15- 075-20,462-0000
County Hamilton FROM CONFIDENTIAL

Operator: License # 04680

SW/4 Sec. 21 Twp. 21 S Rge. 41 East
West

Name: American Exploration Company

1320 Ft. North from Southeast Corner of Section

Address 2100 NCNB Center

3960 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

700 Louisiana

Lease Name HCU Well # 2111-B

City/State/Zip Houston, Texas 77002

Field Name Bradshaw

Purchaser: KN Energy

Producing Formation Winfield

Operator Contact Person: Marty B. McClanahan

Elevation: Ground 3655 KB

Phone (713) 220-8251

Total Depth 2964 PBDT 2920

Contractor: Name: Cheyenne Drilling Co.

License: 5382

Wellsite Geologist: Ron Osterbuhr

Designate Type of Completion
 New Well Re-Entry Workover

Oil S.W.D. Temp. Abd. Inj. Delayed Comp.
 Gas S. I. Inj. Delayed Comp.
 Dry Other (Core, Water Supply, etc.)

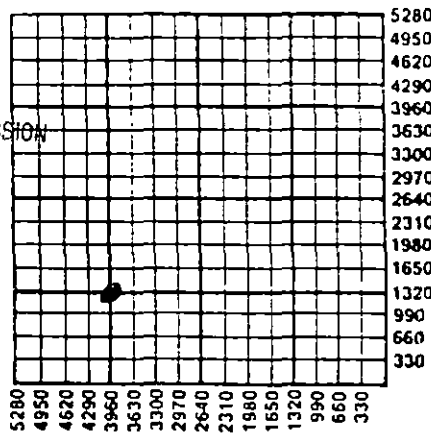
If O.W.M.D.: old well info as follows:
Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

Drilling Method:
 Mud Rotary Air Rotary Cable
8/26/90 8/30/90 10/24/90
Spud Date Date Reached TD Completion Date

RECEIVED
STATE CORPORATION COMMISSION
NOV 7 1990
CONSERVATION DIVISION
Wichita, Kansas



Amount of Surface Pipe Set and Cemented at 360 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from 2964

feet depth to Surface w/ 890 670 sx cmt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months. One copy of all wireline logs and drillers time log shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

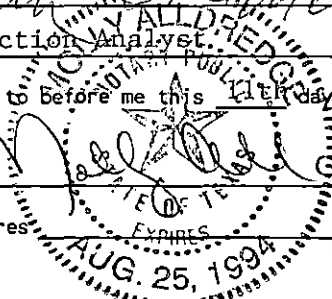
All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Marty B. McClanahan
Title Sr. Production Analyst Date 9/11/90

Subscribed and sworn to before me this 11th day of September, 19 90.

Notary Public [Signature]

Date Commission Expires _____



K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Drillers Timelog Received
Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other
(Specify)

INTRODUCTION

CONFIDENTIAL

SIDE TWO

Operator Name American Exploration Company Lease Name HCU Well # 2111-B

Sec. 21 Twp. 21S Rge. 41 [] East [X] West County Hamilton

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken [] Yes [X] No
Samples Sent to Geological Survey [] Yes [X] No
Cores Taken [] Yes [X] No
Electric Log Run [X] Yes [] No

Formation Description table with columns: Name, Top, Bottom. Rows: Stone Corral Anhy., Winfield, Ft. Riley.

CASING RECORD [X] New [] Used

Report all strings set-conductor, surface, intermediate, production, etc.

Table with 8 columns: Purpose of String, Size Hole Drilled, Size Casing Set (In O.D.), Weight Lbs./Ft., Setting Depth, Type of Cement, # Sacks Used, Type and Percent Additives.

PERFORATION RECORD table with columns: Shots Per Foot, Specify Footage of Each Interval Perforated, Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used), Depth.

TUBING RECORD Size Set At Packer At Liner Run [] Yes [X] No

Date of First Production Producing Method [] Flowing [X] Pumping [] Gas Lift [] Other (Explain)

Table with 8 columns: Estimated Production Per 24 Hours, Oil Bbls., Gas Mcf, Water Bbls., Gas-Oil Ratio, Gravity.

Disposition of Gas: [] Vented [] Sold [] Used on Lease (If vented, submit ACO-18.) METHOD OF COMPLETION [] Open Hole [X] Perforation [] Dually Completed [] Commingled [] Other (Specify)

ORIGINAL CONFIDENTIAL

RELEASED

DRILLERS LOG

NOV 13 1991

AMERICAN EXPLORATION COMPANY
HCU #2111-B
SECTION 21-T21S-R41W
HAMILTON COUNTY, KANSAS

FROM CONFIDEN...

COMMENCED: 08-26-90
COMPLETED: 08-29-90

SURFACE CASING: 349' OF 8 5/8"
CMTD W/120 SX 65/35 POZ, 6% D-20,
1/4#/SX D-29, TAILED IN W/100 SX "H"
3% C.C., 1/4#/SX D-29

FORMATION	DEPTH
SURFACE HOLE	0- 363
SAND & CLAY	363-1590
SAND, SHALE & LIME	1590-2375
SHALE & SAND	2375-2750
LIME & SHALE	2750-2960 RTD

I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

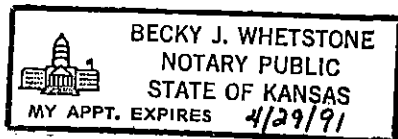
CHEYENNE DRILLING, INC.

A. J. Jacques

A. J. JACQUES

STATE OF KANSAS :ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 4TH DAY OF SEPTEMBER, 1990.



Becky J. Whetstone

BECKY J. WHETSTONE, NOTARY PUBLIC

RECEIVED
STATE OF KANSAS
NOTARY PUBLIC

OCT 31 1990

Capital, Kansas

DOWELL SCHLUMBERGER INCORPORATED

P.O. BOX 4378 HOUSTON, TEXAS 77210

CUSTOMER

RELEASED

ORIGINAL CONFIDENTIAL

OILFIELD SERVICES INDUSTRIAL SERVICES NOV 13 1991

DSI SERVICE ORDER RECEIPT AND INVOICE NO.
30260

DSI SERVICE LOCATION NAME AND NUMBER
Ulysses K SERO 0306 CONFIDENTIAL

CUSTOMER NUMBER CUSTOMER P.O. NUMBER TYPE SERVICE CODE BUSINESS CODES

285

CUSTOMER'S NAME
American Exploration

ADDRESS

CITY, STATE AND ZIP CODE

WORKOVER NEW WELL OTHER API OR IC NUMBER

ARRIVE LOCATION MO. DAY YR. TIME
8 29 90 0430

SERVICE ORDER RECEIPT
I certify that the materials and services listed were authorized and received and all services performed in a workmanlike manner and that I have the authority to accept and execute this document.

JOB COMPLETION MO. DAY YR. TIME
8 29 90

SIGNATURE OF CUSTOMER OR AUTHORIZED REPRESENTATIVE
[Signature]

STATE CODE COUNTY / PARISH CODE CITY
Kansas Hamilton

WELL NAME AND NUMBER / JOB SITE LOCATION AND POOL / PLANT ADDRESS SHIPPED VIA
HCU 2111 B Bradshaw DS

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
048215 - 000	Dump Trk Chg	EA	1	1026.00	1026.00
049102 - 000	Delivery Chg	34 TM	2210	.80	1768.00
049100 - 000	SERVICE Chg	P3	805	1.08	869.40
059697 - 000	PACR	EA	1	110.00	110.00
059200 - 002	Milage	mi.	65	240	156.00
040003 - 000	D903 CLASS C Cmt	PP	305	7.00	2135.00
040015 - 000	D909 CLASS H Cmt	PP	800	1.71	1370.00
045008 - 000	D45 21cpx 3	P3	165	2.30	379.50
045014 - 050	D20 Sell	lbs	2453	.13	318.89
045004 - 050	D44 SALT	lbs	4808	.10	480.80
067005 - 100	S1 Cady	lbs	1227	.32	392.64
044003 - 025	D29 Cellulose flake	lbs	119	1.37	163.03
044002 - 050	D60 Fluid Loss Additive	lbs	56	6.70	375.20
050101 - 044	4 1/2 Guide Shoe	EA	1	105.00	105.00
052001 - 044	4 1/2 Auto-Ril Collar	EA	1	385.00	385.00
050011 - 044	4 1/2 Centralizers	EA	4	48.00	192.00
050711 - 044	4 1/2 Turbollizers	EA	8	50.00	400.00
050704 - 044	4 1/2 TDS Rubber plug	EA	1	70.00	70.00
050014 - 044	4 1/2 Stop Rings	EA	11	16.00	176.00
	4 1/2 Hydro binders	EA	10	45.00	450.00
057499 - 499	K230 Thread stake Kit	EA	1	22.00	22.00
101094 - 000	5433 Polymer	lbs	243	1.77	710.11
				SUB TOTAL:	11,460.57

fld Est

LICENSE/REIMBURSEMENT FEE

LICENSE/REIMBURSEMENT FEE

REMARKS: Thanks for using DS

STATE COUNTY CITY SIGNATURE OF DSI REPRESENTATIVE

% TAX ON \$

% TAX ON \$

% TAX ON \$

TOTAL \$

Oct 31 1991

[Signature]

GENERAL TERMS AND CONDITIONS

1. **AMENDMENTS.** Any modification of this document by the Customer, and all additional or different terms included in the Customer's purchase order or any other document responding to this contract, are hereby objected to. BY REQUESTING THE GOODS AND SERVICES SET FORTH HEREIN, BUYER AGREES TO ALL THE TERMS AND CONDITIONS CONTAINED ON BOTH SIDES OF THIS DOCUMENT.

2. **TERMS.** Cash in advance unless DSI has approved credit prior to the sale. Credit terms of sale for approved accounts are total invoice amount due at DSI's office, Houston, Texas, on or before the 30th day from the date of invoice. Past due accounts are to pay interest on the balance past due at the rate of 1½% per month or the maximum allowable by the applicable state laws if such laws limit interest to a lesser amount. In the event it is necessary to employ an agency and/or attorney to effect collection of said account, Customer agrees to pay all fees directly or indirectly incurred for such collection.

3. **PRICES.** The products and services to be supplied hereunder shall be priced in accordance with DSI's current Price Schedule. As provided in DSI's Price Schedule, special jobs, under unusual conditions, will be subject to special price quotations to reflect increased or reduced costs.

4. **TAXES.** Any tax based on or measured by the charge for sale or rental of products or rendering of service shall be added to the price stated in DSI's Price Schedule.

5. **INDEPENDENT CONTRACTOR.** DSI is and shall be an independent contractor with respect to the performance of this contract, and neither DSI nor anyone employed by DSI shall be the agent, representative, employee or servant of Customer in the performance of this contract or any part hereof.

6. **FORCE MAJEURE.** Any delays or failure by DSI in the performance of this contract shall be excused if and to the extent caused by war, fire, flood, strike, labor trouble, accident, riot, acts of God, or any contingencies beyond the reasonable control of DSI.

7. **DISPOSAL.** Disposal of the chemicals used in the performance of this contract is the responsibility of Customer. Customer agrees the chemicals will be disposed of in accordance with all applicable Federal, State and local laws and regulations.

12. **SEVERABILITY.** It is understood and agreed by the parties hereto that any part, term, or provision of this Contract prohibited by law shall be deemed invalid to the extent of such prohibition and shall be deemed modified to the extent necessary to conform to such rule of law.

SPECIAL TERMS AND CONDITIONS

In addition to the foregoing General Terms and Conditions which are applicable to all services and products furnished by DSI, the following Special Terms and Conditions are applicable to Oil Field Services and Mining Services. In the event of any conflict, inconsistency, or incongruity between the General Terms and Conditions and the Special Terms and Conditions, the Special Terms and Conditions shall govern and control.

13. **WELL.** The term "well" as used herein shall also be construed to include and mean a "mine" or other property being serviced where the work to be performed involves DSI mining services.

14. **CUSTOMER'S RESPONSIBILITY & INDEMNITIES.** The parties agree that Customer has complete custody and control of the well; the conditions created in the well, the drilling equipment, well premises and access routes from highways to well locations. Customer will have the well in readiness for the service and, following service, will return the well to production. The parties further agree that unless caused by DSI's willful misconduct or failure to exercise good faith, Customer shall be fully responsible for and defend, indemnify and save harmless DSI, its officers, agents and employees against:

(i) Liability for damage to property of Customer (and well owner if different from Customer), this provision applying but not limited to subsurface damage and surface damage arising from subsurface damage including any liability based in whole or in part on the negligence of DSI.

(ii) Liability for reservoir loss or damage, or any property damage (including but not limited to damages caused by pollution or contamination), or personal injuries resulting directly or indirectly from subsurface pressure, well blowout or cratering, or losing control of the well including any liability based in whole or in part on the negligence of DSI.

(iii) Liability for any damages whatever resulting directly or indirectly from a subsurface trespass, pollution or contamination arising out of any servicing operation performed by DSI or Customer including any liability based in whole or in part on the negligence of DSI.

(iv) Liability for injury to persons (including death) or damage to property, other than employees and property of DSI, growing out of or in any way, connected with the use of materials in the well which are radioactive, poison, toxic or otherwise hazardous including any liability based in whole or in part on the negligence of DSI.

8. **PRODUCT SALES AND RENTALS - WARRANTY.** DSI warrants only that products (including tools, supplies and materials) furnished shall conform to the quality and specification represented and that DSI can convey good title; DSI MAKES NO WARRANTY OF MERCHANTABILITY, OR THAT SAID PRODUCTS SHALL BE FIT FOR ANY PARTICULAR PURPOSE, NOR IS THERE ANY OTHER WARRANTY EXPRESSED OR IMPLIED EXCEPT AS EXPRESSLY STATED HEREIN. DSI's liability and Customer's exclusive remedy for any cause of action arising out of a product sale or rental pursuant hereto is expressly limited at DSI's option to (a) replacement or such product upon its return to DSI or (b) allowance to Customer of credit for the cost of such product.

9. **SERVICE WARRANTY.** In interpreting information and making recommendations, either written or oral, as to type or amount of material or service to be furnished, or manner of performance, or in predicting results to be obtained therefrom, DSI will give Customer the benefit of its best judgment based on its experience in the field. Nevertheless, all such recommendations or predictions are opinions only; and, in view of the impracticability of obtaining first-hand knowledge of the many variable conditions and/or the necessity of relying on facts and supporting services furnished by others, NO WARRANTY IS GIVEN CONCERNING THE EFFECTIVENESS OF THE MATERIALS USED, RECOMMENDATIONS GIVEN, OR THE SERVICES RENDERED.

10. **LIABILITY AND INDEMNITY.** Customer agrees to be responsible for and to defend, indemnify and save harmless DSI, its officers, agents and employees, from any and all claims, loss, damage or expense by reason of accident, injuries, damages or hurt to any person or property, including property of DSI or Customer, that may occur in connection with or related to the performance of this contract and which is caused in whole or in part by the negligent act or omission of Customer, its agents, servants or employees and whether or not caused in part by the negligent act or omission of DSI. In no event shall DSI be liable for any special, incidental, indirect, punitive, or consequential damage, including, but not limited to, loss of use or loss of profit, for breach of contract, negligence (including DSI's sole negligence) or any other cause of action.

11. DSI. The term "DSI" as used herein is an abbreviation of Dowell Schlumberger Incorporated and where used throughout this agreement, shall be construed to mean Dowell Schlumberger Incorporated, a Delaware corporation.

(v) Liability for damages to property of customer, or third parties or injuries to persons caused or alleged to have been caused by contamination or pollution from the application or use of products designed to control dust, wind erosion, product loss, sealing of ponds, reservoirs, irrigation canals, or sanitary landfills including any liability based in whole or in part on the negligence of DSI.

(vi) Liability for injury to persons (including death) or damage to property growing out of or in any way connected to the use of various equipment provided by DSI at no cost for the sole convenience of and use by the Buyer including any liability based in whole or in part on the negligence of DSI.

(vii) Liability for damage to property of Customer (and well owner if different from Customer) resulting, directly or indirectly, from tools or instruments of DSI being lost in a well, including any liability based in whole or in part on the negligence of DSI.

15. **DOWN-HOLE TOOLS AND INSTRUMENTS.** If tools or instruments of DSI are lost in a well, Customer agrees to make a reasonable effort at Customer's risk and expense to recover same; and, if unable to recover, to pay DSI for same unless such loss or damage was caused solely by DSI's negligence.

16. **OFFSHORE & MARINE OPERATIONS.** For offshore marine operations Customer agrees to insure against loss and assumes full responsibility for damage to equipment furnished by DSI from time of delivery to Customer at landing until returned to landing when transported on craft, or located on platforms not owned or leased by DSI.

Customer shall furnish transportation for crew changes at customer's expense.

CONFIDENTIAL ORIGINAL
 HOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER **036-3026** DATE **8/29/90**
 STAGE **DS** DISTRICT **Ulysses K's**

DS-496 - PRINTED IN U.S.A.

WELL NAME AND NO. **HCU 20111 B** LOCATION (LEGAL) _____
 FIELD-POOL **Bradshaw** FORMATION **Chase**
 COUNTY/PARISH **Hamilton Co. Ks** STATE **Kansas** API NO _____
 NAME **American Exploration**
 AND _____
 ADDRESS _____
 ZIP CODE _____

RIG NAME **Chapenne #5**
 WELL DATA: BIT SIZE **7 1/2** CSGLiner Size **4 1/2** BOTTOMM _____ TOP _____
 TOTAL DEPTH _____ WEIGHT **9.5**
 ROT CABLE FOOTAGE **2963.00**
 MUD TYPE _____ GRADE _____
 BHST BHCT THREAD **8 1/2**
 MUD DENSITY **4.3** LESS FOOTAGE SHOE JOINT(S) _____
 MUD VISC. **2920** Disp. Capacity _____
 NOTE: Include Footage From Ground Level To Head In Disp. Capacity

SPECIAL INSTRUCTIONS
Provide Materials and Services to
Safely Cmt 4 1/2 production string
 IS CASING/TUBING SECURED? YES NO
 LIFT PRESSURE **1770** PSI CASING WEIGHT - SURFACE AREA (3.14 * R²) _____
 PRESSURE LIMIT _____ PSI BUMP PLUG TO **1240** PSI
 ROTATE **60** RPM RECIPROCATATE _____ FT No. of Conveyors **12**

Float TYPE **Auto fill Collar** DEPTH _____
 SPODE TYPE **Cmt nose** DEPTH _____
 Head & Plugs TBG DP SQUEEZE JOB
 Double SIZE _____ TYPE _____
 Single WEIGHT _____ DEPTH _____
 Swage GRADE _____ TAIL PIPE SIZE _____ DEPTH _____
 Knockoff THREAD _____ TUBING VOLUME _____ Bbls
 TOP OR NEW USED CASING VOL BELOW TOOL _____ Bbls
 BOT OR DEPTH _____ TOTAL _____ Bbls
 ANNUAL VOLUME _____ Bbls

JOB SCHEDULED FOR TIME **0700** DATE **8/29/90** ARRIVE ON LOCATION TIME **0630** DATE **8/29/90** LEFT LOCATION TIME **13:15** DATE **8/29/90**

TIME	PRESSURE		VOLUME PUMPED bbl.		INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
	TBG OR DP	CASING	INCREMENT	CUM.				
00:54	300	NA						PRE-JOB SAFETY MEETING
10:54	NA	NA	1	-	1	160	8.33	PSI Test Done
11:01		110	20	-	5.4	160	8.33	160 ahead + Cell
11:06		240	185	-	8.6	Cmt	12.4	Start Lead Cmt
11:48		50	42	-	1.2	Cmt	15.6	Start Tail Cmt
12:07		10	-	-	-	-	-	Shut Down wash due to dropping
12:09		50.3	47.3	-	7.5	160	8.33	Start Displacement
12:17		110	-	-	2.1	160	8.33	Lower Rate
12:20		1240	-	-	-	160	8.33	Bump Plug
12:21		390	-	-	-	-	-	Release PSI
12:22		0	-	-	-	-	-	Sub Done

REMARKS _____

SYSTEM CODE	NO OF SACKS	YIELD CU FT/SK	COMPOSITION OF CEMENTING SYSTEMS				SLURRY MIXED	
							BBLs	DENSITY
1	470	2.21	37% ^{pow} + 6% Q20 + 3% S + 10% Q44 + 1/4 #1 SK Q29				184.9	12.4
2	300	1.18	Class H + .3% Q60 + 1/4 #12K Q29				42.0	15.6
3								
4								
5								
6								

OCT 31 1990

BREAKDOWN FLUID TYPE: HESITATION SQ RUNNING SQ CIRCULATION LOST YES NO
 PRESSURE: MAX _____ MIN _____
 CEMENT CIRCULATED TO SURF YES NO **22** Bbls
 BREAKDOWN: PSI FINAL _____ PSI _____ DISPLACEMENT VOL _____ Bbls
 TYPE OF WELL: OIL GAS STORAGE INJECTION BRINE WATER WILDCAT
 WASHED THRU PERFS: YES NO TO _____ FT MEASURED DISPLACEMENT WIRELINE
 PERFORATIONS: TO _____ TO _____
 CUSTOMER REPRESENTATIVE: **Wm Rogers**
 DS SUPERVISOR: **Gene Black**

CONFIDENTIAL

OILFIELD SERVICES
 INDUSTRIAL SERVICES
 NOV 13 1990

DSI SERVICE ORDER
 RECEIPT AND INVOICE NO.
 03-1253010

DSI SERVICE LOCATION NAME AND NUMBER
 Ulysses FROM 03-512

CUSTOMER NUMBER
 CUSTOMER P.O. NUMBER

TYPE SERVICE CODE
 BUSINESS CODE

CUSTOMER'S NAME
 AMERICAN EXPLORATION

WORKOVER W
 NEW WELL N
 OTHER O
 API OR IC NUMBER

ADDRESS
 CITY, STATE AND ZIP CODE

ARRIVE LOCATION
 MO. DAY YR. TIME
 8 26 90 1730

DSI will furnish and Customer shall purchase materials and services required in the performance of the following SERVICE INSTRUCTIONS or DSI INDUSTRIAL SERVICE CONTRACT NO. _____ in accordance with the terms and conditions as printed on the reverse side of this form.

SERVICE ORDER RECEIPT
 I certify that the materials and services listed were authorized and received and all services performed in a workmanlike manner and that I have the authority to accept and execute this document.

Furnish equipment + materials to cement 8" casing

JOB COMPLETION
 MO. DAY YR. TIME
 8 26 90 2123

STATE CODE COUNTY/PARISH CODE CITY
 TX Hamilton

SIGNATURE OF CUSTOMER OR AUTHORIZED REPRESENTATIVE
 [Signature]

WELL NAME AND NUMBER / JOB SITE LOCATION AND POOL / PLANT ADDRESS SHIPPED VIA
 HCU #2111-B Loc. 21-215-416 DS

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
048209-000	PUMP chg	EA.	1	433.00	433.00
048209-001	Additional Footage 300	FT	63	.41	25.83
059200-002	mileage	MI.	71	2.40	170.40
059697-000	PACK chg.	EA.	1	110.00	110.00
049102-000	hauling 2 1/16" x 71	Ton/Mi.	7.50	.80	600.00
049100-000	sealing chg.	EA.	242	1.08	261.36
040003-000	D903 CLASS	EA.	78	7.00	546.00
040015-000	D909 CLASS	EA.	100	6.85	685.00
045008-000	D35 bitum 3	EA.	42	2.30	96.60
045014-050	D20 bentonite	EA.	626	.13	81.38
047005-100	CAPG	EA.	595	.32	190.40
044003-025	D29 colophane flake	EA.	55	1.37	75.35
050001-085	TEXAS PATENT SHOP	EA.	1	200.00	200.00
053003-085	ORIFICE FILL INSERT	EA.	1	300.00	300.00
056011-085	CENTRALIZERS	EA.	2	68.00	136.00
048501-085	TOP WOODS PLUG	EA.	1	86.00	86.00
057499-001	THREAD LOCK	EA.	1	22.00	22.00
056019-085	STOP KEY	EA.	1	21.00	21.00

THANKS FOR USING DS
 Field est. \$4040.32

LICENSE/REIMBURSEMENT FEE
 SUB TOTAL STATE C

REMARKS: STATE % TAX ON \$
 COUNTY % TAX ON \$
 CITY % TAX ON \$

SIGNATURE OF DSI REPRESENTATIVE TOTAL \$
 James C. Equinell

GENERAL TERMS AND CONDITIONS

1. AMENDMENTS. Any modification of this document by the Customer, and all additional or different terms included in the Customer's purchase order or any other document responding to this contract, are hereby objected to. BY REQUESTING THE GOODS AND SERVICES SET FORTH HEREIN, BUYER AGREES TO ALL THE TERMS AND CONDITIONS CONTAINED ON BOTH SIDES OF THIS DOCUMENT.

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6. FORCE MAJEURE. Any delays or failure by DSI in the performance of this contract shall be excused if and to the extent caused by war, fire, flood, strike, labor trouble, accident, riot, acts of God, or any contingencies beyond the reasonable control of DSI.

7. DISPOSAL. Disposal of the chemicals used in the performance of this contract is the responsibility of Customer. Customer agrees the chemicals will be disposed of in accordance with all applicable Federal, State and local laws and regulations.

12. SEVERABILITY. It is understood and agreed by the parties hereto that any part, term, or provision of this Contract prohibited by law shall be deemed invalid to the extent of such prohibition and shall be deemed modified to the extent necessary to conform to such rule of law.

SPECIAL TERMS AND CONDITIONS

In addition to the foregoing General Terms and Conditions which are applicable to all services and products furnished by DSI, the following Special Terms and Conditions are applicable to Oil Field Services and Mining Services. In the event of any conflict, inconsistency, or incongruity between the General Terms and Conditions and the Special Terms and Conditions, the Special Terms and Conditions shall govern and control.

13. WELL. The term "well" as used herein shall also be construed to include and mean a "mine" or other property being serviced where the work to be performed involves DSI mining services.

14. CUSTOMER'S RESPONSIBILITY & INDEMNITIES. The parties agree that Customer has complete custody and control of the well, the conditions created in the well, the drilling equipment, well premises and access routes from highways to well locations. Customer will have the well in readiness for the service and, following service, will return the well to production. The parties further agree that unless caused by DSI's willful misconduct or failure to exercise good faith, Customer shall be fully responsible for and defend, indemnify and save harmless DSI, its officers, agents and employees against:

(i) Liability for damage to property of Customer (and well owner if different from Customer), this provision applying but not limited to subsurface damage and surface damage arising from subsurface damage including any liability based in whole or in part on the negligence of DSI.

(ii) Liability for reservoir loss or damage, or any property damage (including but not limited to damages caused by pollution or contamination), or personal injuries resulting directly or indirectly from subsurface pressure, well blowout or cratering, or losing control of the well including any liability based in whole or in part on the negligence of DSI.

(iii) Liability for any damages whatever resulting directly or indirectly from a subsurface trespass, pollution or contamination arising out of any servicing operation performed by DSI or Customer including any liability based in whole or in part on the negligence of DSI.

(iv) Liability for injury to persons (including death) or damage to property, other than employees and property of DSI, growing out of or in any way, connected with the use of materials in the well which are radioactive, poison, toxic or otherwise hazardous including any liability based in whole or in part on the negligence of DSI.

8. PRODUCT SALES AND RENTALS - WARRANTY. DSI warrants only that products (including tools, supplies and materials) furnished shall conform to the quality and specification represented and that DSI can convey good title; DSI MAKES NO WARRANTY OF MERCHANTABILITY, OR THAT SAID PRODUCTS SHALL BE FIT FOR ANY PARTICULAR PURPOSE, NOR IS THERE ANY OTHER WARRANTY EXPRESSED OR IMPLIED EXCEPT AS EXPRESSLY STATED HEREIN. DSI's liability and Customer's exclusive remedy for any cause of action arising out of a product sale or rental pursuant hereto is expressly limited at DSI's option to (a) replacement or such product upon its return to DSI or (b) allowance to Customer of credit for the cost of such product.

9. SERVICE WARRANTY. In interpreting information and making recommendations, either written or oral, as to type or amount of material or service to be furnished, or manner of performance, or in predicting results to be obtained therefrom, DSI will give Customer the benefit of its best judgment based on its experience in the field. Nevertheless, all such recommendations or predictions are opinions only; and, in view of the impracticability of obtaining first-hand knowledge of the many variable conditions and/or the necessity of relying on facts and supporting services furnished by others, NO WARRANTY IS GIVEN CONCERNING THE EFFECTIVENESS OF THE MATERIALS USED, RECOMMENDATIONS GIVEN, OR THE SERVICES RENDERED.

10. LIABILITY AND INDEMNITY. Customer agrees to be responsible for and to defend, indemnify and save harmless DSI, its officers, agents and employees, from any and all claims, loss, damage or expense by reason of accident, injuries, damages or hurt to any person or property, including property of DSI or Customer, that may occur in connection with or related to the performance of this contract and which is caused in whole or in part by the negligent act or omission of Customer, its agents, servants or employees and whether or not caused in part by the negligent act or omission of DSI. In no event shall DSI be liable for any special, incidental, indirect, punitive, or consequential damage, including, but not limited to, loss of use or loss of profit, for breach of contract, negligence (including DSI's sole negligence) or any other cause of action.

11. DSI. The term "DSI" as used herein is an abbreviation of Dowell Schlumberger Incorporated and where used throughout this agreement, shall be construed to mean Dowell Schlumberger Incorporated, a Delaware corporation.

(v) Liability for damages to property of customer or third parties or injuries to persons caused or alleged to have been caused by contamination or pollution from the application or use of products designed to control dust, wind erosion, product loss, sealing of ponds, reservoirs, irrigation canals, or sanitary landfills including any liability based in whole or in part on the negligence of DSI.

(vi) Liability for injury to persons (including death) or damage to property growing out of or in any way connected to the use of various equipment provided by DSI at no cost for the sole convenience of and use by the Buyer including any liability based in whole or in part on the negligence of DSI.

(vii) Liability for damage to property of Customer (and well owner if different from Customer) resulting, directly or indirectly, from tools or instruments of DSI being lost in a well, including any liability based in whole or in part on the negligence of DSI.

15. DOWN-HOLE TOOLS AND INSTRUMENTS. If tools or instruments of DSI are lost in a well, Customer agrees to make a reasonable effort at Customer's risk and expense to recover same; and, if unable to recover, to pay DSI for same unless such loss or damage was caused solely by DSI's negligence.

16. OFFSHORE & MARINE OPERATIONS. For offshore marine operations Customer agrees to insure against loss and assumes full responsibility for damage to equipment furnished by DSI from time of delivery to Customer at landing until returned to landing when transported on craft, or located on platforms not owned or leased by DSI.

Customer shall furnish transportation for crew changes at customers expense.

CEMENTING SERVICE REPORT

ORIGINAL

DS-496 PRINTED IN U.S.A.

DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER	DS-12-3010	DATE	8-26-90
STAGE	DS	DISTRICT	114-505-15

WELL NAME AND NO. **HFL #2111-G**

LOCATION (LEGAL) **Sec 2 B15-41c**

FIELD-POOL **Swatchlow**

FORMATION **Unitfield**

COUNTY/PARISH **Hamilton**

STATE **KS**

API NO

RIG NAME **Hayward Drilling #5**

WELL DATA

BIT SIZE **2 1/4** CSGLiner Size **2 1/4** BOTTOM **NOV 13 1991**

TOTAL DEPTH **3** WEIGHT **20**

ROT CABLE FOOTAGE **3:00** FROM CONFIDENTIAL

MUD TYPE GRADE **KCS**

BHST BHCT THREAD **8 1/2**

MUD DENSITY LESS FOOTAGE SHOE JOINTS **1.02** TOTAL

DISP. VISC Disp Capacity **20.5**

CONFIDENTIAL

NAME **American Exploration**

AND

ADDRESS

ZIP CODE

SPECIAL INSTRUCTIONS

run 8 1/2 casing

SHOE	TYPE	DEPTH	TOOL	TYPE	DEPTH
SOFT	SOFT	21.4	SOFT	SOFT	
SHOE	SHOE	7.1	SHOE	SHOE	
SHOE	SHOE	16.6	SHOE	SHOE	

IS CASING/TUBING SECURED? YES NO

LIFT PRESSURE **124** PSI CASING WEIGHT - SURFACE AREA (3.14 * R²)

PRESSURE LIMIT PSI BUMP PLUG TO **470** PSI

ROTATE RPM RECIPROCATE FT No of Centralizers **2**

Head & Plugs TBG D P

Double SINGLE SWAGE KNOCKOFF

SIZE WEIGHT GRADE THREAD

SCWEEZE JOB

TOOL TYPE DEPTH

TAIL PIPE SIZE DEPTH

TUBING VOLUME Bbl's

CASING VOL BELOW TOOL Bbl's

TOTAL Bbl's

ANNUAL VOLUME Bbl's

JOB SCHEDULED FOR TIME **5:00** DATE **8-26-90**

ARRIVE ON LOCATION TIME **1:00** DATE **8-26-90**

LEFT LOCATION TIME **2:50** DATE **8-26-90**

TIME	PRESSURE		VOLUME PUMPED BBL		INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
	TBG OR D P	CASING	INCREMENT	CUM				
2054		1000						PRE JOB SAFETY MEETING 1261 Test
2058		10	10		5.9	11.2		start water ahead
2100		140	43		5.9	cut 12.4		start lead cement
2108		110	21		4	cut 15.6		start tail cement
2113		0						shut down down tool string
2114		0	20.5		5	11.2		start displacement
2117		70		10	5	11.2		cement to surface
2118		100		10	5	11.2		circulate
2121		470		21	5	11.2		check tool string
2121								check float & building
2123								run pipe

REMARKS

SYSTEM CODE	NO. OF SACKS	YIELD CU FT/SK	COMPOSITION OF CEMENTING SYSTEMS		SLURRY MIXED	
			WATER	ADDITIONALS	BBL'S	DENSITY
1	120	2.1	water	3500 + 10% D20 + 5% Swatch + 47/1229	45	12.4
2						
3	100	7.18	class H.	3500 + 10% D20 + 5% Swatch + 47/1229	21	15.6
4						
5						
6						

BREAKDOWN FLUID TYPE

HESITATION SQ RUNNING SQ

CIRCULATION LOST YES NO

Cement Circulated To Surf YES NO **10** Bbl's

BREAKDOWN PSI FINAL PSI

DISPLACEMENT VOL **20.5** Bbl's

Washed Thru Perfs YES NO TO FT

MEASURED DISPLACEMENT YES NO

PERFORATIONS TO TO

CUSTOMER REPRESENTATIVE **Hand**

DS SUPERVISOR **Jones**

ORIGINAL CASING & CEMENTING REPORT

CONFIDENTIAL

NOV 13 1991

Well Name HCU 2111 B
Casing 4 1/2 - 9.5"

Location _____
Date 9-29-90 FROM CONFIDENTIAL

Jts. On	m On	Size	Wt.					Jts	Depth	m Run	
Locat.	Locat.	mm	kg/m	Cr.	Rqe.	THD	T&C	Make	Run	Landed	In Well
69	2963.68	4 1/2	9.5		3	8 RD	S		69	m	2963.68
										m	2.10
										m	2965.78
										m	- 2.00
Shoe Make <u>Weatherford</u> Type <u>Reg Pattern</u> Length <u>.80</u> m											
Collar Make <u>Weatherford</u> Type <u>Auto Lick</u> Length <u>1.30</u> m											
Landing Jt. (When Used) Length _____ m											
Overall Length of Casing String <u>2965.78</u> m											
m Up From K.B. (subtract) <u>2.00</u> m											
Setting Depth By Driller _____ m By Tally <u>2963.78</u> m											

CENTRALIZERS

SCRATCHERS

Make & No. Weatherford Four
Position Middle of Shoe Jt. 1st 3 Collars
Remarks (Thread Lock) Weld, Mill

Turbolizers
Make & No. Weatherford
Position _____
Remarks Thread Lock Shoe, Flat Roller - 2 Collars

Hole Size 7 7/8 mm Casing In Hole Size 1 1/2 mm
Depth _____ m Setting Depth _____ m
Mud Type Starch Wt. 9.3 kg/m Visc. 38 S/LWL 5.6 cm

BOP's _____
Power Tong Co Franklin Torque Max. 1300 Min. 950
Casing String Wt. 25,000 daN Remarks Land Float @

Shoe Jt. 33.30
Cementing Co. Dowell Operator Greg

TYPES & QUANTITIES OF CEMENT

Date _____

Filler Volume Amount 470 sx m³ Type 65/35 P02 Wt. 12.4 kg/m³

Additives 6% D-20 + 3% CC + 1/4" D-29 + 10% Salt + 1/4" / 54 - D-29

Tail In Volume Amount 200 sx m³ Type Class H Wt. 15.6 kg/m³

Additives .3% D-60 + 1/4" / 54 D-29

HT. Cemented _____ Water Ahead 10 m³ Start Mix 240 @ 8 m³

Finish Mix 50" @ 1.2 m³ Pumping Press 700 kPa Bump Press 1240 kPa

Float Held YES Cement Returns 22 BAL m³

Plug Down 12:30 Date 8-29-90

Wt. Landed in Slips 25,000 daN Make of Bowl _____

Size _____ mm Series _____ Slip & Seal Esembly _____

Remarks (Wellhead - Make, Type, Size) Larkin - Threaded

Related Csg. while (in-109) Pumped 350 Sx CMT 5 Casing Tongues
up. Stop Rotation

Co. Rep. Don Rodgers

OCT 31 1990

