

DRILLING PERMIT APPLICATION PERMIT 1149AHL

COLLIER LAND AND CATTLE CORPORATION 27-3AHL

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Raccoon Point Field

SUBMITTED ON: NOVEMBER 18, 2010

BREITBURN FLORIDA, LLC, OPERATOR
RACCOON POINT FIELD,
COLLIER COUNTY FLORIDA



November 18, 2010

Ed Garrett, P.G.
Oil and Gas Supervisor
Bureau of Mines and Mineral Regulation
Florida Department of Environmental Protection
Tallahassee FL 32399

Re: Permit #1149AHL for production enhancement through well completion in the existing 27-3 well on Pad 4 for BreitBurn Florida LLC at Raccoon Point Field, Pad 4.

Dear Mr. Garrett:

Enclosed are two hard copies and 20 PDF copies of Permit Modification #1149AHL for a re-entry and re-drill to a new bottom hole location with lateral well bores (LWBs) installed after completion for BreitBurn Florida LLC at Raccoon Point Field, Pad 4 in Collier County, Florida (Figure 1).

The following information describes the lateral well bores and provides background information for your consideration.

Confidentiality

All information regarding this well other than the supplemental documents supplied for permit application enclosed here for review are to be held confidential as provided by statute and rule. The information that is requested to be held confidential should include but not be limited to: drilling reports, test results, well logging information, production reports and any geologic interpretations relative to this well submitted by the permittee.

Consultant/Agent

Lampl Herbert Consultants, Inc. of Tallahassee is representing BreitBurn Florida, LLC. Attached is a copy of the agent authorization letter (Attachment 1).



Figure 1: Drilling Pads at Raccoon Point Field

Operator

The operator and permit applicant for this well is BreitBurn Florida LLC, whose Florida address is:

P. O. Box 3236
Immokalee, FL 34143.

BreitBurn Florida, LLC is a Foreign Limited Liability Company who is registered to conduct business in Florida whose principal address is:

515 South Flower Street, Suite 4800,
Los Angeles, CA 90071.

The authorization to conduct business in Florida is included as Attachment 2.

The Raccoon Point Unit

The Raccoon Point Field was unitized as the “Raccoon Point Field Unit” in October 1993 and recorded in the records of Collier County on October 14, 1993 in OR Book 187, Page 1247. The well proposed here is within the unit area. BreitBurn Florida, LLC is successor in interest to Calumet Florida, Inc. who was the operator at the time the unit was created. The unit agreement is included as Attachment 4.

Geological Objective

The intent of this permit modification is to expand the drainage efficiency in the vicinity of the in the field with a well bore to a new bottom hole location. Drainage will be enhanced by using short radius lateral well bores drilled into the producing formation from the horizontal leg of the well. The installation of LWBs would be at the discretion of Breitburn and the decision to proceed would be made after the permitted lateral is drilled.

The LWBs would be spaced along the permitted lateral section and drilled out to a distance of 300-600 feet from the main well bore. The locations for the kick off of each LWB would be at the discretion of Breitburn. The proposed areas for LWB installations are shown of the accompanying figure.

Breitburn believes that the drainage efficiency would be increased in a similar manner to formation fracturing. However, the LWBs would have the advantage of being placed in a controlled manner and of having a known geospatial orientation within the producing formation.

Breitburn proposes the following course of action:

- Re-entry of the existing 27-3 well (now temporarily abandoned) and using the existing casing string drill a new pilot and horizontal leg completion; the re-drill will begin at 6,500 feet.
- Re-entry will include a pilot hole to obtain cores and logs; the pilot will be plugged back and a horizontal well bore will be drilled.
- After completion, to eight LWBs from the horizontal leg totaling approximately 4,000 feet of additional well bore may be drilled.
- Placement of the LWBs would be at kick off points along the permitted horizontal leg at locations selected by the drilling engineer based on the drilling conditions encountered.
- Directional surveys will be run to document the geospatial point where the LWB starts and ends.

- Required offsets from unit boundaries will be maintained.
- Directional survey information will be submitted for the permanent well file.
- BMMR will provide a “naming convention” to identify each LWB.
- Plugging and abandonment will be as prescribed in 62C-29.009 “Plugging and Abandonment of Wells.”

Refer to Figure 2 for location of area in the subsurface where LWBs be installed. The Well Plat is included as Attachment 3.

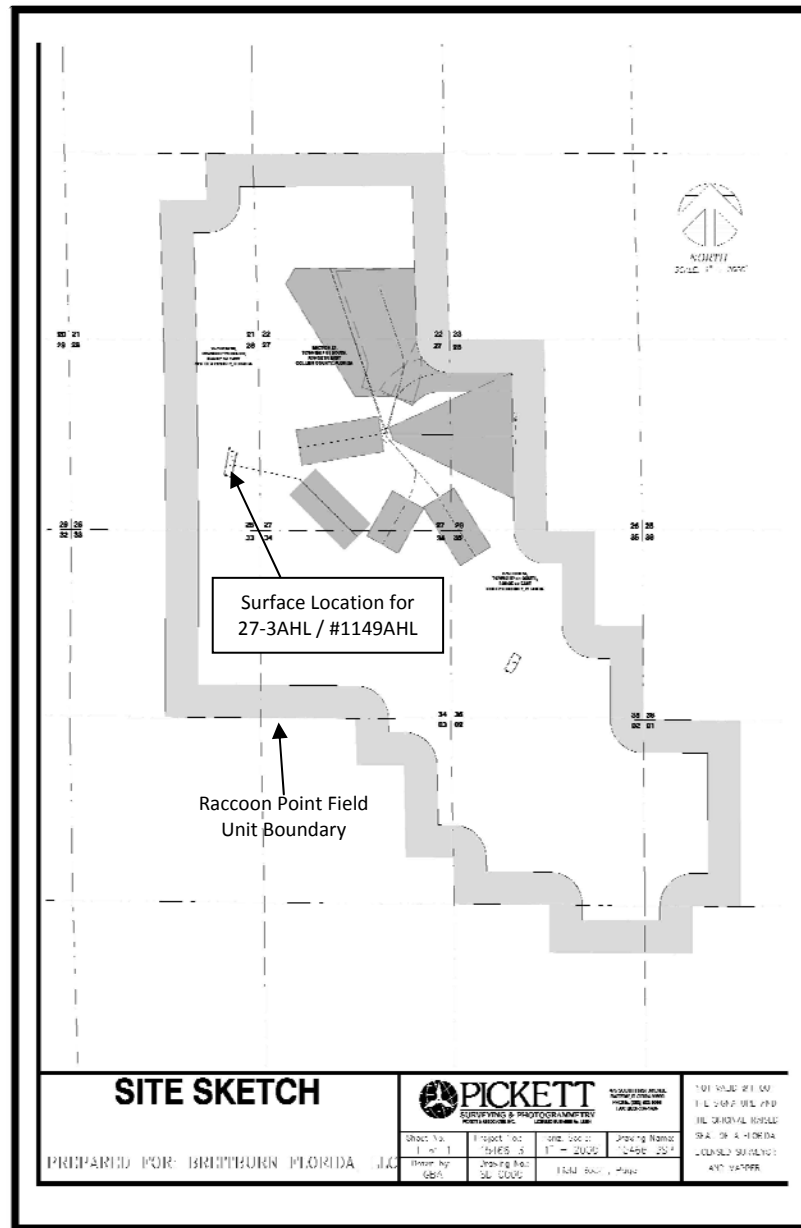


Figure 2 – Location of subsurface area for LWBs to be installed

Well Name

The well name is *Collier Land and Cattle Corporation 27-3AHL*. The bottom hole legs will be designated by the addition of an “L” and a number indicating the LWB: for example if four legs are installed they would be identified as 1149L1, 1149L2, 1149L3, and 1149L4.

Surface Location

The wellbore for permit 1149AHL will be the existing 27-3 on Pad 4 in Raccoon Point.

Security for Plugging, Performance and Site Restoration

BreitBurn Florida LLC has provided a conventional surety bond for this well.

Organizational Report Form

BreitBurn Florida LLC will be the operator for this well. BreitBurn currently operates the Raccoon Point Field and the Organizational Report Form (Form 1) is on file with the Bureau of Mines and Mineral Regulation.

Location Plat

Location plat details have been prepared by the Pickett & Associates is attached as Attachment 3.

Drilling Permit Application Form

A completed Form 3 is attached as Attachment 4.

Gathering Lines and Pipeline

The produced oil will be placed in flow lines and transported back for treatment at Pad 2. The existing flow lines were renovated in 2008 and are above ground and parallel with the access roads in the field. After treatment, the oil is transported to market through the existing Raccoon Point Pipeline to the tank battery at Devil’s Garden about 22 miles north of Raccoon Point.

Housing and Personnel

Drilling personnel will be housed in temporary trailers located on Pad 1 (Figure 1). All wastewater will be contained in storage tanks and removed from the site by a waste contractor. Drinking water will be supplied by a bottled water contractor. An office trailer with living quarters will be located on Pad 4 for the drilling supervisor.

Drilling Rig and Equipment

The rig company scheduled for this well is the Precision Drilling Rig 314. Information on this rig is attached (Attachment 8).

Drilling Operations

The operations will be underway 24 hours a day for the approximately 60-80 days of drilling and testing. There will be a crew of 12-18 persons on site during this time. Housing is provided in three trailers located on Pad 1 and two administrative/quarters trailers on site. Electricity will be provided by diesel generator sets. Sanitary waste will be collected in holding tanks and removed by a local contractor. Solid waste will be placed in containers and hauled to a MSW landfill. Drill cuttings and drilling fluids will be disposed of in a manner approved by FDEP. Water for drilling will be supplied by two 400-gpm water wells already on the site.

Storm Water Management

The drilling site on Pad 4 has a storm water management that includes collection and treatment of water that comes in contact with rig equipment. The rig will sit inside of a low berm with a liner system. The pad is approximately 3.0 acres in area and has a 2-foot perimeter berm that contains all storm water.

Description of Proposed Drilling Program

The procedures to re-drill this well have been presented in Attachment 10. The major components are summarized below.

Casing Program

The casing program is detailed in the narrative materials submitted as Attachment 10. A well bore sketch is included as Attachment 11.

Well Control Equipment

The provisions of Chapter 62C-27.006, Florida Administrative Code are incorporated into the drilling program by reference. The following rig equipment is to be provided (Table 1). Details of the well control program are presented in Attachment 12.

Table 1 – Well Control			
Hole Size	Size/Pressure	Bottom to Top Arrangement	Low - High Test Pressures Rams / Annular
20"	21 3/4" 2M	A	N.A.
14 3/4"	21 3/4" 2M	A	N.A.
9-7/8"	11" 5M	P/S/B/A	250 - 3,500 / 250 – 2,000
4-3/4"	11" 5M	P/S/B/A	250 - 3,500 / 250 – 2,000

P = Pipe Ram B= Blind Ram A= Annular S=Drilling Spool

Directional Program

The directional drilling programs for both the pilot hole and the horizontal leg are attached as Attachment 13.

Cementing Program

The generic cementing program is detailed in the narrative materials submitted as the "Cementing Services Proposal" supplied by Halliburton and is attached as Attachment 14. In as much as this well is a re-drill from an existing wellbore the portions of the cementing program below 6,500 feet will be used as applicable. Field modifications of this plan will occur as drilling conditions dictate.

Drilling Fluids Program

Halliburton Fluid Systems developed the recommended drilling fluid program and a copy is attached as Attachment 15. Inasmuch as this well is a re-drill from an existing wellbore the portions of the drilling fluids program below 6,500 feet will be used as applicable. Field modifications of this plan will occur as drilling conditions dictate.

Hydrogen Sulfide Safety Plan

The hydrogen sulfide safety plan as submitted in previous applications has been modified to begin monitoring at the base of the Lake Trafford formation at ~13,320 feet TVD. The plan is included here as Attachment 6.

* * *

In the event additional information is required, please contact Lampl Herbert Consultants.

Sincerely,

The image shows a handwritten signature of Thomas A. Herbert in black ink. To the right of the signature is a circular professional seal. The seal has a double-lined border. Inside the border, the text "THOMAS A. HERBERT" is at the top, "LICENSE" is in the center, "NO. 5" is below "LICENSE", "STATE OF FLORIDA" is below "NO. 5", and "PROFESSIONAL GEOLOGIST" is at the bottom. There are small stars on either side of "STATE OF FLORIDA".

Thomas A. Herbert, Ph.D., P.G.
Vice President
Agent for BreitBurn Florida, LLC

Professional Geologist: Florida #5

ATTACHMENTS

- ATTACHMENT 1 Agent Authorization Letter
- ATTACHMENT 2 Florida Corporate Authorization
- ATTACHMENT 3 Well Plat
- ATTACHMENT 4 Raccoon Point Field Unit Agreement
- ATTACHMENT 5 Photographs of Pad 4 at Raccoon Point Field
- ATTACHMENT 6 Sketch of Rig Layout on Pad 4
- ATTACHMENT 7 Hydrogen Sulfide Safety Plan
- ATTACHMENT 8 Precision Drilling; Rig 314 Information
- ATTACHMENT 9 Form 3 – Application for Permit to Drill
- ATTACHMENT 10 Proposed Drilling Program
- ATTACHMENT 11 Casing & Well Bore Schematic
- ATTACHMENT 12 Well Control Plan
- ATTACHMENT 13 Directional Drilling Program
 - Pilot
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- ATTACHMENT 15 Drilling Fluids Program

ATTACHMENT 1

Agent Authorization Letter



March 24, 2008

To Whom It May Concern:

Re: Agent authorization for Lampl Herbert Consultants

This letter will serve as notice that Thomas A. Herbert of the firm of Lampl Herbert Consultants, Inc. of Tallahassee, Florida, is authorized to act as agent on behalf of BreitBurn Florida LLC, a Delaware limited liability company ("BreitBurn Florida"), with respect to oil and gas permitting and regulatory matters in the State of Florida. This authorization may be revoked by BreitBurn Florida at any time.

The Division of Corporations of the Office of the Secretary of State designates BreitBurn Florida as a foreign corporation authorized to do business in the State of Florida.

Sincerely,

BreitBurn Florida LLC

By: BreitBurn Operating L.P., its sole member

By: 

Chris Williamson

Vice President, Operations

BreitBurn Operating GP, LLC, general partner of BreitBurn Operating L.P.

ATTACHMENT 2

Florida Corporate Authorization

State of Florida



Department of State

I certify from the records of this office that BREITBURN FLORIDA LLC is a Delaware limited liability company authorized to transact business in the State of Florida, qualified on May 24, 2007.

The document number of this limited liability company is M07000003104.

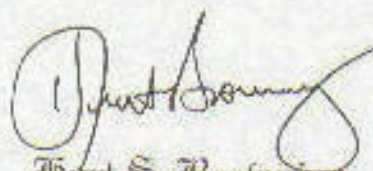
I further certify that said limited liability company has paid all fees due this office through December 31, 2008, that its most recent annual report was filed on April 22, 2008, and its status is active.

I further certify that said limited liability company has not filed a Certificate of Withdrawal.

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capitol, this the
Fourth day of June, 2008



CR2EO22 (01-07)


Karl S. Brodman
Secretary of State

ATTACHMENT 3

Well Plat

**Sealed Original
Drawing on File**

Raccoon Point Pad 4

Permit 1149AHL

Collier Land and Cattle Corporation 27-3AHL

**UNIT BOUNDARY
UNIT BUFFER AREA
(SHADED AREA)**

**SECTION 28,
TOWNSHIP 51 SOUTH,
RANGE 34 EAST
COLLIER COUNTY, FLORIDA**

**SECTION 27,
TOWNSHIP 51 SOUTH,
RANGE 34 EAST
COLLIER COUNTY, FLORIDA**

Legend:

FNL From North Line
FSL From South Line
FWL From West Line
FEL From East Line

DISTANCES ARE IN FEET.

POTENTIAL AREAS OF
LOCATION FOR PROPOSED
LATERAL PLACEMENT.

POINT A
LAT. 25°59'54.67" N
LONG. 80°55'03.08" W
1,707 feet FSL
1,557 feet FWL

POINT B
LAT. 25°59'39.64" N
LONG. 80°54'46.47" W
192 feet FSL
3,059 feet FWL

POINT C
LAT. 25°59'32.64" N
LONG. 80°54'54.22" W
516 feet FNL
2,350 feet FWL

POINT D
LAT. 25°59'47.67" N
LONG. 80°55'10.83" W
999 feet FSL
843 feet FWL

EXISTING OIL WELL
(27-3);
RE-ENTRY FOR 27-3AH
LAT. 25°59'56.137" N
LONG. 80°55'28.874" W
N 605281.16
E 524737.13
ELEVATION-11.17'
1,848 feet FSL
795 feet FEL

WELL #27-3AH
WELL LABEL 27-3AH CSG
LAT. 25°59'52.09" N
LONG. 80°55'07.97" W
N 604873.77
E 526644.52
1,446 feet FSL
1,108 feet FWL

WELL #27-3AH
WELL LABEL 27-3AH HEEL
LAT. 25°59'51.17" N
LONG. 80°55'06.96" W
N 604781.17
E 526737.12
1,353 feet FSL
1,200 feet FWL

WELL #27-3AH
WELL LABEL 27-3AH
LATERAL T
LAT. 25°59'46.22" N
LONG. 80°55'01.48" W
N 604281.17
E 527237.12
854 feet FSL
1,695 feet FWL

WELL #27-3AH
WELL LABEL 27-3AH TOE
LAT. 25°59'36.14" N
LONG. 80°54'50.34" W
N 603264.37
E 528253.92
162 feet FNL
2,703 feet FWL

**Raccoon Point Field
Unitized by Agreement
Dated 30 September 1993**

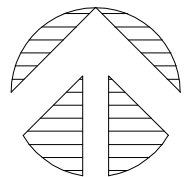
SURVEYOR'S NOTES:

1. This is a specific purpose survey prepared to illustrate proposed well and hole locations.
2. North and the coordinate values shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 27. Vertical values are NAVD 88. Units are in feet.
3. The section line information is shown for general location purposes only and is based upon SFWMD GIS data; not on field survey.

JOHN M. CLYATT, P.S.M.
FLORIDA REGISTRATION No. 4092
PICKETT AND ASSOCIATES, INC.
FLORIDA REGISTRATION No. LB 364

10/07/10

SURVEY DATE



NORTH

SCALE: 1" = 1200'

LOCATED IN SECTION 28,
TOWNSHIP 51 SOUTH, RANGE 34 EAST
PREPARED FOR: BREITBURN FLORIDA, LLC
PROJECT: 27-3AHL WELL LOCATION



PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC.

475 SOUTH FIRST AVENUE
BARTON, FLORIDA 33500
PHONE: 800-880-6105
FAX: (800) 884-1481

Project No.:	15466-3	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 1200'	OR		10/07/10		JMC		Original Release	
DWG. Name:	15466-3-SP								
Drawn By:	GBA								
Field Bk / Pg.:	706								

NOT VALID WITHOUT
THE SIGNATURE AND
THE ORIGINAL RAISED
SEAL OF A FLORIDA
LICENSED SURVEYOR
AND MAPPER.

Drawing # SD2916

ATTACHMENT 4

Raccoon Point Field Unit Agreement

01749773

COLLIER COUNTY

1993 OCT 14 AM 10:43

RECORDED
UNIT AGREEMENT

1871
OR BOOK

001242

PAGE

REC 89.00
PRM 77.50
LXC _____
INT _____
IND _____

RACCOON POINT FIELD UNIT

COLLIER COUNTY, FLORIDA

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Plains Resources Inc.
1600 Smith Street
Houston, TX 77002

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UNIT AGREEMENT
RACCOON POINT FIELD UNIT
COLLIER COUNTY, FLORIDA

THIS AGREEMENT is entered into as of respective dates of execution below.

WITNESSETH:

WHEREAS, in the interest of the public welfare and to promote conservation and increase the ultimate recovery of Unitized Substances from the Raccoon Point Field, in Collier County, Florida, and to prevent waste and avoid the drilling of unnecessary wells, and to protect the correlative rights of the owners of interests therein, it is deemed necessary and desirable to unitize the Oil and Gas Rights in and to the Unitized Formation in order to conduct Unit Operations pursuant this Agreement and to the applicable provisions of the laws of the State of Florida.

NOW, THEREFORE, it is provided as follows:

ARTICLE 1

DEFINITIONS

As used in this Agreement:

1.1 Unit Area is the land identified by Tracts in Exhibit A and shown on Exhibit B as to which this Agreement applies, which area may be enlarged or revised as provided herein.

1.2 Unitized Formation is the subsurface portion of the Unit Area comprised of the Sunniland Oil Pool, which is defined as that interval found in the Collier Land & Cattle 27-3 Well, located in the Southwest Quarter of Section 27, Township 51 South, Range 34 East, Collier County, Florida, between the electric log True Vertical Depths of 11,300 feet and 11,425 feet and all intervals correlative therewith.

1.3 Unitized Substances are all oil, gas, gaseous substances, sulphur contained therein, condensate, distillate, and all associated and constituent liquid or liquefiable substances within or produced from the Unitized Formation.

1.4 Working Interest is an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, including an unleased mineral interest, the owner of which is primarily obligated to pay, either in cash or out of production or otherwise, a portion of the Unit Expenditure.

1.5 Royalty Interest is a right to or interest in any portion of the Unitized Substances or proceeds thereof other than a Working Interest.

1.6 Royalty Owner is a Person who owns a Royalty Interest.

1.7 Working Interest Owner, Owner, or Lessee is a Person who owns a Working Interest.

1.8 Tract is the land identified as such and given a tract number in Exhibit B.

1.9 Operating Agreement is the agreement having the same Effective Date as the Agreement, entitled "Operating Agreement, Raccoon Point Field Unit, Collier County,

Florida", by and between Calumet Florida, Inc. and Legacy Resources Co., L.P., which Agreement shall govern the Unit Operations.

1.10 Unit Operator is the Working Interest Owner designated by Working Interest Owners under the Operating Agreement to conduct Unit Operations.

1.11 Tract Participation is the percentage shown on Exhibit A for allocating Unitized Substances to a Tract.

1.12 Unit Participation of a Working Interest Owner is the sum of the percentages obtained by multiplying the Working Interest of such Working Interest Owner in each Tract by the Tract Participation of such Tract.

1.13 Oil and Gas Rights are the rights to explore, develop, and operate lands within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof.

1.14 Unit Operations are all operations conducted pursuant to this Agreement and the Operating Agreement.

1.15 Unit Equipment is all personal property, lease and well equipment, plants, and other facilities and equipment taken over or otherwise acquired for the joint account for utilization in Unit Operations.

1.16 Unit Expenditure is all cost, expense, or indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Agreement and the Operating Agreement for or on account of Unit Operations.

1.17 Effective Date is the time and date this Agreement becomes effective as provided in Article 13.

1.18 Person is any individual, corporation, partnership, association, receiver, trustee, curator, executor, administrator, guardian, tutor, fiduciary, or other representative of any kind, any department, agency, or instrumentality of the state, or any governmental subdivision thereof, or any other entity capable of holding an interest in the Unitized Formation.

ARTICLE 2

EXHIBITS

2.1 Exhibits. The following exhibits, which are attached hereto, are incorporated herein by reference:

2.1.1 Exhibit A is a schedule that lists each Tract in the Unit Area and shows its Tract Participation.

2.1.2 Exhibit B is a map that shows the boundary lines of the Unit Area, the Tracts therein, and the current producing wells within the Unit Area.

2.1.3 Exhibit C is a listing of geological and engineering procedures utilized in mapping the productive limit.

2.2 Reference to Exhibits. When reference is made to an exhibit, it is to the original exhibit or, if revised, to the last revision.

2.3 Exhibits Considered Correct. Exhibits A and B shall be considered to be correct until revised as herein provided.

2.4 Correcting Errors. If it subsequently appears that any mathematical miscalculation or clerical error has been made, Unit Operator shall correct the mistake by revising the exhibit(s) to conform to the facts. The revision shall not include any re-evaluation of engineering or geological interpretations used in determining Tract Participation. Each such revision of an exhibit made prior to thirty (30) days after the Effective Date shall be effective as of the Effective Date. Each such revision thereafter made shall be effective at 7:00 a.m. on the first day of the calendar month next following the filing for record of the revised exhibit or on such other date as may be determined by Working Interest Owners and set forth in the revised exhibit. Unit Operator may also revise the Exhibits A, and B from time to time as required to reflect resolution of title disputes and to conform to changes in ownership of which Unit Operator has been notified as provided in this Agreement.

2.5 Filing Revised Exhibits. If an exhibit is revised, Unit Operator shall execute an appropriate instrument with the revised exhibit attached and file the same with the State of Florida Department of Environmental Protection and for record in Collier County, Florida.

ARTICLE 3

CREATION AND EFFECT OF UNIT

3.1 Oil and Gas Rights Unitized. All Oil and Gas Rights of Royalty Owners in and to the lands identified in Exhibits A and B, and all Oil and Gas Rights of Working Interest Owners in and to said lands, are hereby unitized insofar as the respective Oil and Gas Rights pertain to the Unitized Formation, so that Unit Operations may be conducted with respect to the Unitized Formation as if the Unit Area had been included in a single lease executed by all Royalty Owners, as lessors, in favor of the Working Interest Owners, as lessees, and as if the lease contained all of the provisions of this Agreement.

3.2 Amendment of Leases and Other Agreements. The provisions of the various leases, agreements, division and transfer orders or other instruments pertaining to the respective Tracts or the production therefrom are amended to the extent necessary to make them conform to the provisions of this Agreement, but otherwise shall remain in effect.

3.3 Continuation of Leases and Term Interests. Unit Operations conducted upon any part of the Unit Area or production of Unitized Substances from any part of the Unitized Formation, except for the purpose of determining payments to Royalty owners, shall be considered as production from or operations upon each Tract, and such production or operations shall have the same effect under the terms of each lease or mineral or royalty interest grant as to all lands and formations covered thereby just as if there were production from or operations upon each Tract.

3.4 Titles Unaffected by Unitization. Nothing herein shall be construed to result in any transfer of title to Oil and Gas Rights.

3.5 Injection Rights. Working Interest Owners are hereby granted the right to inject into the Unitized Formation any substances in whatever amounts Working Interest Owners deem expedient for Unit Operations, together with the right to drill, use, and maintain injection wells in the Unit Area, and to use for injection purposes any non-producing or abandoned wells or dry holes, and any producing wells completed in the Unitized Formation.

ARTICLE 4

UNIT OPERATIONS

4.1 Unit Operator. Calumet Florida, Inc. is hereby designated as Unit Operator, subject to the Operating Agreement. Unit Operator shall have the exclusive right to conduct Unit Operations, which shall conform to the provisions of this Agreement and the Operating Agreement. If there is any conflict between such agreements, this Agreement shall govern.

4.2 Method of Operation. To the end that the quantity of Unitized Substances ultimately recoverable may be increased and waste prevented, Working Interest Owners may, at their sole option and discretion, and in accordance with good engineering and production practices, construct and place into operation necessary and adequate facilities for such injection as is appropriate for purposes of pressure maintenance, secondary recovery or other recovery program and for the production, treatment and handling of Unitized Substances. —

4.3 Change of Method of Operation. Nothing herein shall prevent Working Interest Owners from discontinuing or changing in whole or in part any method of operation which, in their opinion, is no longer in accord with good engineering and production practices. Other methods of Operation may be conducted or changes may be made by Working Interest Owners from time to time if determined by them to be feasible, necessary or desirable to increase the ultimate recovery of Unitized Substances, subject to any necessary approval of regulatory authorities.

ARTICLE 5

TRACT PARTICIPATIONS

5.1 Tract Participations. The Tract Participation of each Tract is shown in Exhibit A and has been determined in the manner described in Exhibit C.

5.2 Relative Tract Participations. Subject to the provisions of Section 10.1.2, if the Unit Area is changed, the revised Tract Participations of the Tracts in the Unit Area and which were within the Unit Area prior to the change shall remain in the same ratio one to another.

ARTICLE 6

ALLOCATION OF UNITIZED SUBSTANCES

6.1 Allocation to Tracts. Subject to the provisions of Article 7 hereof, all Unitized Substances produced and saved shall be allocated to the Tracts in accordance with the respective Tract Participations as set forth in Exhibit A effective during the period that the Unitized Substances were produced. The amount of Unitized Substances allocated to each

Tract, regardless of whether the amount is more or less than the actual production of Unitized Substances produced from any well or wells on such Tract, shall be deemed for all purposes to have been produced from such Tract. All severance, production, or other taxes levied by the State of Florida on account of the ownership, severance, production, or sale of Unitized Substances produced from the Unit Area and allocated to the Tracts within the Unit Area shall be paid on the basis of the portion of Unitized Substances so allocated to such Tracts regardless of whether the amount of Unitized Substances so allocated to such Tracts be more or less than the amount of the actual production of Unitized Substances from the well or wells on such Tracts.

6.2 Distribution Within Tracts. The Unitized Substances allocated to each Tract shall be distributed among, or accounted for, the Persons entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal effect. If any Oil and Gas Rights in a Tract are now or hereafter become divided and owned in severalty as to different parts of the Tract, the owners of the divided interests, in the absence of an agreement providing for a different division, shall share in the Unitized Substances allocated to the Tract, or in the proceeds thereof, in proportion to the surface acreage of their respective parts of the Tract.

ARTICLE 7

USE OR LOSS OF UNITIZED SUBSTANCES

7.1 Use of Unitized Substances. Working Interest Owners may use or consume Unitized Substances for Unit Operations, including but not limited to the injection thereof into the Unitized Formation.

7.2 Royalty Payments. No royalty, overriding royalty, production, or other payments shall be payable on account of Unitized Substances used, unavoidably lost, or consumed in Unit Operations.

ARTICLE 8

TITLES

8.1 (a) Working Interest Titles. If title to a Working Interest fails, the rights and obligations of Working Interest Owners by reason of the failure of title shall be governed by the Operating Agreement.

(b) Royalty Owner Titles. If title to a Royalty Interest fails, the party whose title failed shall not be entitled to share hereunder with respect to such interest.

8.2 Payment of Taxes to Protect Title. If any taxes are not paid when due by or for any owner of surface rights to lands within the Unit Area, or severed mineral interests or Royalty Interests in such lands, or lands outside the Unit Area on which Unit Equipment is located, Unit Operator may, with approval of Working Interest Owners, at any time prior to tax sale, or expiration of period of redemption after tax sale, pay the tax and redeem or purchase such rights, interests, or property. Any such payment shall be an item of Unit

Expense. Unit Operator shall, if possible, withhold from any proceeds derived from the sale of Unitized Substances otherwise due any delinquent taxpayer an amount sufficient to defray the costs of such payment, such withholding to be credited to Working Interest Owners. Such withholding shall be without prejudice to any other remedy available to Unit Operator or Working Interest Owners.

8.3 Transfer of Title. Any conveyance of all or any part of any interest owned by a Person with respect to any Tract shall be subject to this Agreement. No change of title shall be binding upon Unit Operator, or upon any Person other than the Persons involved in the transfer, until 7:00 a.m. on the first day of the calendar month next succeeding the date of receipt by Unit Operator of a photocopy or a certified copy of the recorded instrument evidencing such change in ownership.

8.4 Waiver of Rights to Partition. Each party hereto agrees that during the existence of this Agreement, it will not resort to any action to partition the Unitized Formation or the Unit Equipment, and to that extent waives the benefits of all laws authorizing such partition.

ARTICLE 9

EASEMENTS OR USE OF SURFACE

9.1 Grant of Easements. Subject to the provisions of Section 9.3 of this Article, Working Interest Owners shall have the right to use as much of the surface of the land within the Unit Area as may be reasonably necessary for Unit Operations and the removal of Unitized Substances from the Unit Area.

9.2 Use of Water. Working Interest Owners shall have and are hereby granted free use of water from the Unit Area for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner.

9.3 Surface Usage. Working Interest Owners recognize that all or most of the surface of the land within the Unit Area is owned by the Federal Government and is managed by the National Park Service as the Big Cypress National Preserve and that surface usage is regulated by that agency. The conduct of Unit Operations, including the treatment of the surface estate, shall be in accordance with the Minerals Management Plan of the Big Cypress National Preserve Unit of the National Park Service.

ARTICLE 10

ENLARGEMENTS OF UNIT AREA

10.1 Enlargements of Unit Area. The Unit Area may be enlarged from time to time to include additional acreage reasonably proved to be productive from the Sunniland Oil Pool upon (a) written approval of such an enlargement by the Working Interest Owners owning seventy-five (75%) percent in interest, as costs are shared, in the Unit Area prior to enlargement, (b) the written agreement to the enlargement by the Working Interest Owners owning seventy-five (75%) percent in interest, as costs are shared, in the area to be added, and (c) the written agreement to the enlargement by the Royalty Owners owning seventy-five (75%) percent in interest in the area to be added, all subject to the following:

10.1.1 The portion of Unitized Substances from the Unit Area as enlarged (and not required in the conduct of Unit Operations or unavoidably lost) to be allocated to the added area, shall be based on a formula for sharing that is considered to treat each Tract and each Owner fairly and equitably during the remaining course of Unit Operations; and the Unitized Substances so allocated to the added area shall be allocated to the Tracts therein on a fair and equitable basis, and as to the area added the Effective Date shall be the effective date of such enlargement.

10.1.2 The remaining portion of the Unitized Substances from the Unit Area as enlarged shall be allocated among the Tracts within the previously established Unit Area in the same proportions as had been theretofore specified immediately prior to the enlargement, except that if the Tract Participation of a Tract is found to be erroneous because shown to be so by data developed subsequent to the former determination, or upon the correction of mathematical or clerical errors as set out in Section 2.4, the Tract Participation of such Tract shall be changed accordingly.

10.1.3 The Effective Date of any enlargement of the Unit Area shall be 7:00 a.m. on the first day of the calendar month next following the effective date of the Order of the State of Florida Department of Environmental Protection approving the enlargement and unitizing the Unit Area as enlarged.

10.2 No Retroactive Allocation of Expenses or Production. There shall be no retroactive allocation or adjustment of Unit Expenditures or of interests in the Unitized Substances produced, or the proceeds thereof, by reason of an enlargement of the Unit Area; provided, however, this limitation shall not prevent an adjustment of investment among the Working Interest owners pursuant to the Operating Agreement.

10.3 Determination of Tract Participation and Revision of Exhibits. The Unit Operator shall determine the Tract Participation of each Tract within the Unit Area as enlarged and, upon approval by Working Interest Owners, revise Exhibits A and B accordingly and file for record the revised exhibits in Collier County, Florida and with the State of Florida Department of Environmental Protection.

ARTICLE 11

RELATIONSHIPS OF PERSONS

11.1 No Partnership. All duties, obligations and liabilities arising hereunder shall be several and not joint or collective. This Agreement shall not be construed to create an association or trust, or to impose a partnership or fiduciary duty, obligation or liability. Each Person affected hereby shall be individually responsible for its own obligations.

11.2 No Joint Refining or Marketing. This Agreement shall not be construed to provide, directly or indirectly, for any joint refining or marketing of Unitized Substances.

11.3 Royalty Owners Free of Costs. This Agreement shall not be construed to impose upon any Royalty Owner any obligation to pay Unit Expense as to such Royalty Interest unless such Royalty Owner is otherwise so obligated; provided, however, that any interest created out of a Working Interest shall be subject to the security rights provided by the Operating Agreement. The owner of any such interest shall be subrogated to the security rights available against the Working Interest out of which such interest was created.

ARTICLE 12FORCE MAJEURE

12.1 Force Majeure. All obligations arising hereunder, except for the payment of money, shall be suspended while compliance is prevented therewith, in whole or in part, by fire, flood, explosion, high water, windstorm or other acts of God, federal, state, county or municipal laws, orders or regulations, or any rule, regulation or order of a governmental entity or agency, strike, labor dispute, or other industrial disturbance, war, insurrection, civil disturbance or riot, shortage or inability to obtain materials, inability to obtain at reasonable cost, and after the exercise of reasonable diligence, easements, permits or licenses, or any other cause or causes, whether similar or dissimilar, beyond the reasonable control of a person. No person shall be required against its will to adjust or settle any labor dispute. Neither this Agreement nor any lease or other instrument, agreement or interest subject hereto shall be terminated by reason of suspension of Unit Operations due to any one or more of the causes set forth in this Section.

ARTICLE 13EFFECTIVE DATE

13.1 Effective Date. The Effective Date of this Agreement shall be the date set forth on the Order rendered by the State of Florida Department of Environmental Protection establishing the Unit Area as a unit; provided, however, if the following conditions are not accomplished on or before November 1, 1993, this Agreement shall automatically terminate: (a) the rendering of an Order by the State of Florida Department of Environmental Protection establishing the Unit and (b) the execution or ratification of this Agreement by not less than seventy-five (75%) percent in interest of the royalty owners in the Unit Area and the execution or ratification of this Agreement by Working Interest Owners owning at least seventy-five (75%) percent in interest as costs are shared in the Unit Area.

13.2 Filing of Unit Agreement and Certificate of Effectiveness. Unit Operator shall cause to be filed for record in Collier County, Florida, a true copy of one (1) counterpart of this Agreement and a Certificate of Effectiveness setting forth the Effective Date of this Agreement and the unitization contemplated hereby.

ARTICLE 14TERM

14.1 Term. This Agreement shall remain in effect so long as Unitized Substances are produced, or are capable of being produced, in paying quantities without a cessation of more than sixty (60) consecutive days, or so long as other Unit Operations are conducted without a cessation of more than sixty (60) consecutive days, unless sooner terminated by Working Interest Owners owning a combined Unit Participation of seventy-five (75%) percent or more whenever such Working Interest Owners determine that Unit Operations are no longer economically feasible.

14.2 Effect of Termination. Upon termination of this Agreement, the further development and operation of the Unitized Formation as a unit shall cease. The relationships among owners of Oil and Gas Rights shall thereafter be governed by the terms and provisions of the leases and other instruments, not including this Agreement, affecting the separate Tracts. Each oil and gas lease and other agreement covering lands within the Unit Area shall remain in force for sixty (60) days after the date on which this Agreement terminates, and for such further period as is provided by the lease or other agreement.

14.3 Salvaging Equipment Upon Termination. If not otherwise granted by the leases or other instruments affecting each Tract, Royalty Owners hereby grant Working Interest Owners a reasonable time period after the date of termination of this Agreement within which to salvage and remove the equipment utilized in Unit Operations.

ARTICLE 15

APPROVAL

15.1 Original, Counterpart, or Other Instrument. An owner of Oil and Gas Rights shall become a party to this Agreement by signing the original of this instrument, any counterpart hereof, or other instrument agreeing to be a party hereto or ratifying this Agreement. The signing of any such instrument shall have the same effect as if all Persons had signed the same instrument.

15.2 Commitment of Interests to Unit. The execution of this Agreement as provided above by a Person shall bind that Person and commit all interests owned or controlled by that Person within the Unit Area as of the date of such execution, and additional interests within the Unit Area thereafter acquired.

ARTICLE 16

RATIFICATION OF OIL, GAS AND MINERAL LEASES

16.1 Ratification of Oil, Gas and Mineral Leases. The undersigned hereby expressly ratify and confirm the oil, gas and mineral leases covering lands subject to this Agreement, and any amendments and supplements to such leases.

ARTICLE 17

GENERAL

17.1 Determinations by Working Interest Owners. All decisions, determinations, or approvals by Working Interest Owners hereunder shall be made pursuant to the provisions of the Operating Agreement unless otherwise provided herein.

17.2 Amendments Affecting Working Interest Owners. Amendments hereto relating wholly to Working Interest Owners may be made if signed by all Working Interest Owners.

17.3 Additional Information, Revision of Exhibits. It is recognized that the perimeter of the Unit Area and the calculation of those factors utilized in the formula for the determination of the participations shown on Exhibit "A" have been calculated using the best geological and engineering data available at the time of the preparation and circulation of this Agreement, and that additional geological and engineering data may become available

through additional development, which, when considered and evaluated, may result in a change of the perimeter of the Unit Area and one or more of said factors. It is, therefore, agreed that the unit Operator, using all data available on the Effective Date, and applying thereto the same formula prescribed herein for the original determinations thereof, and upon the approval of the Working Interest Owners owning not less than seventy-five (75%) percent in the Unit Area, may revise Exhibits A, B, and/or C so as to reflect such changes and upon approval by State of Florida Department of Environmental Protection, shall file for record the revised Exhibits in Collier County, Florida, setting forth the effective date of any such revision.

17.4 Binding Effect of Agreement. Subject to the fulfillment of the conditions set forth herein, this Agreement shall be binding upon all Persons who execute or ratify the same notwithstanding the fact that one or more of the Royalty Owners or one or more of the Working Interest Owners should fail or refuse to join herein or ratify this Agreement.

17.5 Successors and Assigns. This Agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors and assigns, and shall constitute a covenant running with the lands, leases, and interests covered or affected hereby.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the dates opposite their respective signatures.

WITNESSES:

DATE

Legacy Resources Co., L.P.

Marsha A. Bell
Marsha A. Bell
Shelli R. Woiteshek
Shelli R. Woiteshek

September 30, 1993

By:

J.P. Hofer
J.P. Hofer
Executive Vice President

By: _____

By: _____

By: _____

By: _____

through additional development, which, when considered and evaluated, may result in a change of the perimeter of the Unit Area and one or more of said factors. It is, therefore, agreed that the unit Operator, using all data available on the Effective Date, and applying thereto the same formula prescribed herein for the original determinations thereof, and upon the approval of the Working Interest Owners owning not less than seventy-five (75%) percent in the Unit Area, may revise Exhibits A, B, and/or C so as to reflect such changes and upon approval by State of Florida Department of Environmental Protection, shall file for record the revised Exhibits in Collier County, Florida, setting forth the effective date of any such revision.

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IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the dates opposite their respective signatures.

WITNESSES:

DATE

CALUMET FLORIDA, INC.

Verneetta D. Harrell
VERNETTA D. HARRELL
Robert R. Cain
ROBERT R. CAIN

9-29-93

By:

G. M. McCarroll
G. M. McCarroll
Vice President

By: _____

By: _____

By: _____

By: _____

JOINT/INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1993, by _____ as his/her free act and deed. He/she is personally known to me or has produced _____ as identification.

(SEAL)

Notary Public, State of_____
Printed Notary Name

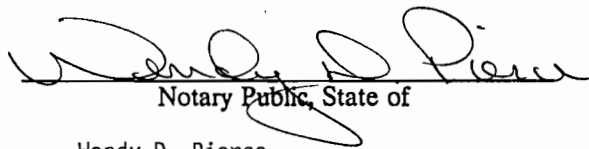
My Commission Expires: _____

CORPORATE ACKNOWLEDGMENT

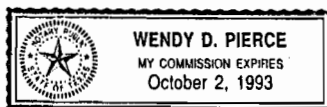
STATE OF TEXASCOUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 29th day of September, 1993, by G. M. McCarroll, Vice President of Calumet Florida, Inc. on behalf of said corporation. He/she is personally known to me or has produced _____ as identification.

(SEAL)


Notary Public, State of

Wendy D. Pierce

Printed Notary NameMy Commission Expires: October 2, 1993

JOINT/INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1993, by _____ as his/her free act and deed. He/she is personally known to me or has produced _____, as identification.

(SEAL)

Notary Public, State of __________
Printed Notary Name

My Commission Expires: _____

PARTNERSHIP

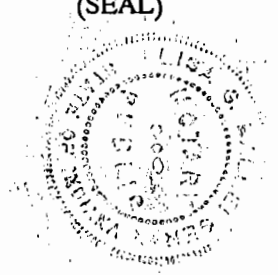
~~COMMON LAW~~

ACKNOWLEDGMENT

STATE OF IndianaCOUNTY OF Marion

The foregoing instrument was acknowledged before me this 30th day of September, 1993, by John P. Hofer, Executive Vice President
(Name) (Title/Position)
of Legacy Resources Co., L.P. limited partnership on behalf of said ~~corporation~~. He/she is
(Name of Corporation)
personally known to me or has produced _____, as identification.

(SEAL)



Lisa G. Ballenger
Notary Public, State of Indiana

Lisa G. Ballenger

Printed Notary Name

My Commission Expires: March 11, 1995

RACCOON POLYMER FIELD UNIT - COLLIER COUNTY, FLORIDA

EXHIBIT "A"

UNIT PARTICIPATION OF EACH TRACT

<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION PERCENTAGE</u>
21 - 1	0.117633
22 - 2	0.568678
22 - 1	0.128971
21 - 4	1.102633
22 - 3	3.790488
22 - 4	0.648754
28 - 1	0.811031
27 - 2	3.253689
27 - 1	2.418919
26 - 2	0.387268
28 - 4	0.670367
27 - 3	16.990391
27 - 4	9.996435
26 - 3	1.059406
33 - 1	2.257804
34 - 2	10.089770
34 - 1	22.717966
35 - 2	0.824495
35 - 1	0.014775
33 - 4	0.514113
34 - 3	1.666006
34 - 4	3.220790
35 - 3	1.900125
35 - 4	0.292665
3 - 1	0.111255
2 - 2	2.486215
2 - 1	7.636436
1 - 2	0.547419
3 - 4	0.002375
2 - 3	1.771410
2 - 4	1.410009
1 - 3	0.556631
11 - 1	0.023916
12 - 2	<u>0.011162</u>
TOTAL:	100.000000

OR BOOK

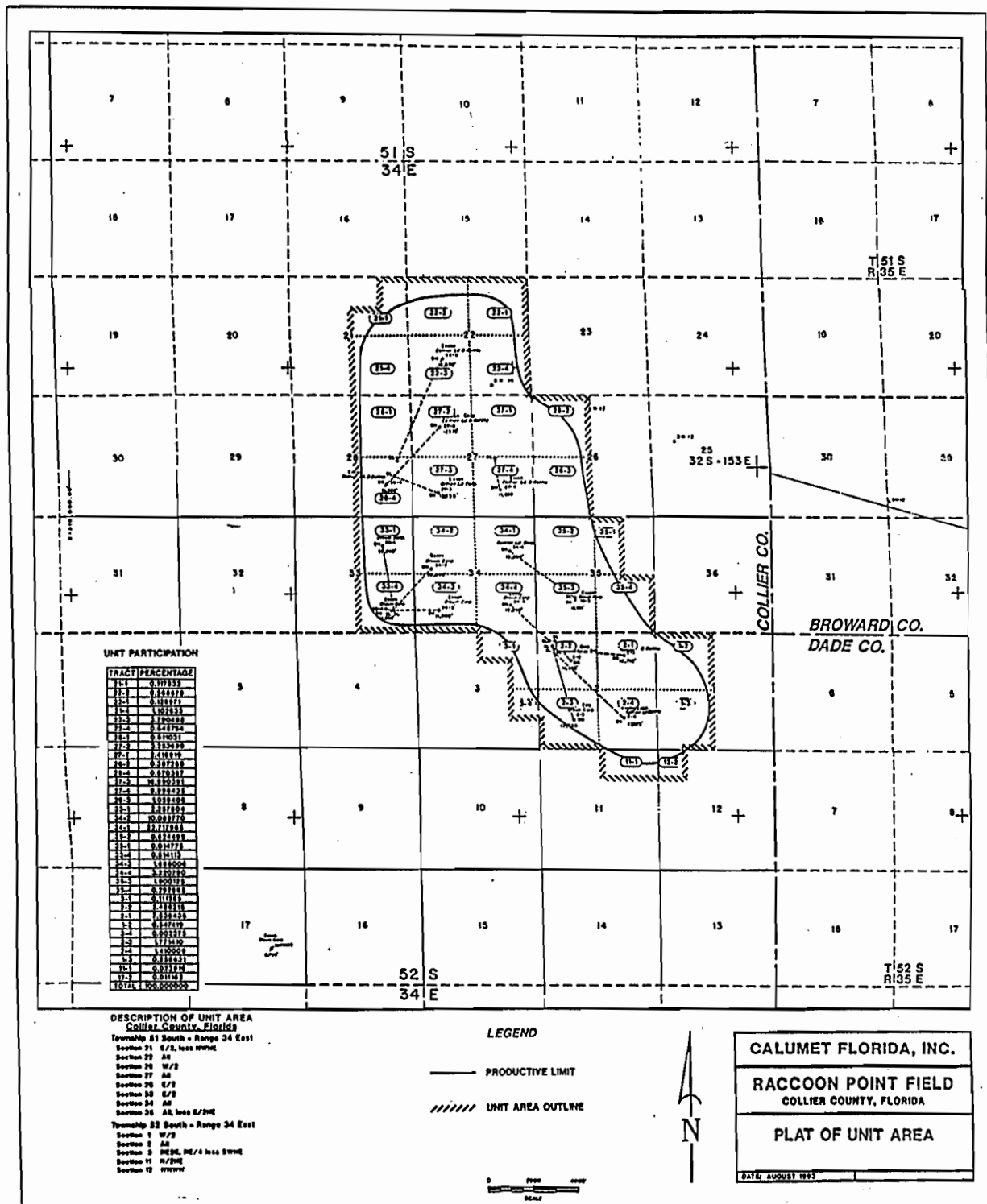
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RACCOON POINT FIELD UNIT - COLLIER COUNTY, FLORIDA

EXHIBIT "B"



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RACCOON POINT FIELD UNIT - COLLIER COUNTY, FLORIDA

EXHIBIT "C"

This Exhibit "C" contains the geological and engineering procedures utilized in mapping the productive limit, designating the Unit Area, calculating Tract participation as well as the definitions of factors utilized in the calculation and a Table showing the calculation.

I. PROCEDURE USED IN MAPPING PRODUCTIVE LIMIT

The productive limit of the Sunniland Oil Pool, as shown on Exhibit "B", outlines the periphery of the total productive acres within the Unit Area. Said productive outline for the Sunniland porosity shall be established by the structural contour which defines the oil-water contact as positioned on the structural contour map of the top of porosity equal to or greater than 12%. This procedure for defining the porosity productive outline is contingent upon the existence of said porosity structurally down to or beyond the structurally mapped oil-water contact. If such porosity does not exist down to the structural contour which defines the oil-water contact, then the porosity productive outline shall be the zero contour on the net porosity-feet map for the porosity.

II. PROCEDURE USED IN DESIGNATING UNIT AREA

The Unit Area includes the entirety of each drilling unit on which there is a productive well and the entirety of all other Tracts which are wholly within the area defined by the productive limit shown on Exhibit "B". A Tract which is not part of a drilling unit and which lies partly within and partly without the Unit Area is included within the Unit Area as a Tract to the extent that the Tract lies contiguously within a regular governmental quarter-quarter section in which some portion of the is Tract situated within the productive limit.

III. PROCEDURE USED IN CALCULATING TRACT PARTICIPATION

The formula utilized in calculating Tract Participation includes the following three factors: Porosity-Acre-Feet, Useable Wellbore(s) and Twelve Months Production attributable to each Tract.

The formula used herein calculates the above factors as follows: 40% Porosity-Acre-Feet + 10% Useable Wellbore(s) + 50% Twelve Months Production

IV. DEFINITIONS OF FACTORS UTILIZED IN THE CALCULATION OF TRACT PARTICIPATION

1. Porosity-Acre-Feet - (40% of Tract Participation Formula)

Porosity-Acre-Feet underlying a Tract is a function of the productive acres of the Unitized Formation underlying the Tract, the thickness in feet of the Unitized Formation underlying the Tract and the porosity of the Unitized Formation underlying the Tract which equals or exceeds 12%. Porosity-Acre-Feet underlying a Tract are established by summing the Porosity-Acre-Feet for all porosity members of the Unitized Formation underlying a Tract. Porosity-Acre-Feet for each porosity member underlying a Tract is established by (1) determining the porosity of each foot of productive interval in each porosity member in each well, (2) determining the porosity-feet of productive interval in each porosity member in each well drilled by summing the porosities equaling or exceeding 12% as determined for each true vertical one-foot interval of the porosity member, and (3) developing a porosity-feet contour map based on the porosity-feet in each well and the porosity productive outline

Exhibit "C" - continued

as defined in "Procedure Used in Mapping Productive Limit" in paragraph I of this Exhibit "C", and calculating mathematically the Porosity-Acre-Feet underlying each Tract.

The Porosity-Acre-Feet underlying the total Unit Area is the sum of Porosity-Acre-Feet credited to each Tract.

The Porosity-Acre-Feet participation of each Tract is calculated by dividing the Porosity-Acre-Feet in the Unitized Formation underlying each Tract by the total of such Porosity-Acre-Feet underlying the total Unit Area and is expressed as a percent.

$$\begin{array}{l} \text{Porosity-Acre-Feet} \\ \text{Tract Participation} \end{array} = \frac{\begin{array}{l} \text{Porosity-Acre-Feet} \\ \text{Underlying a Tract} \end{array}}{\begin{array}{l} \text{Porosity-Acre-Feet} \\ \text{Underlying the Total Unit Area} \end{array}}$$

2. Useable Wellbore(s) - (10% of Tract Participation Formula)

Useable wellbore(s) is any existing wellbore(s) that is or can be used as a point of fluid extraction or injection.

$$\begin{array}{l} \text{Useable Wellbore(s)} \\ \text{Tract Participation} \end{array} = \frac{\begin{array}{l} \text{Useable Wellbore(s)} \\ \text{On a Tract} \end{array}}{\begin{array}{l} \text{Useable Wellbore(s)} \\ \text{Within the Total Unit Area} \end{array}}$$

3. Twelve Months Production - (50% of Tract Participation Formula)

Twelve Months Production is the gross production attributable to a Tract from the period 7/1/92 through 6/30/93.

$$\begin{array}{l} \text{Twelve Months Production} \\ \text{Tract Participation} \end{array} = \frac{\begin{array}{l} \text{Twelve Months Production} \\ \text{From a Tract} \end{array}}{\begin{array}{l} \text{Twelve Months Production} \\ \text{From the Total Unit Area} \end{array}}$$

Exhibit "C" - continued

V. TABLE SHOWING CALCULATION OF TRACT PARTICIPATION

TRACT NUMBER	POROSITY--ACRE--FEET		USEABLE WELLBORE(S)		12 MONTHS PRODUCTION		TRACT PARTICIPATION PERCENTAGE *
	TRACT ACRE FEET	% OF TOTAL ACRE FEET	TRACT USEABLE WELLBORE(S)	% OF TOTAL USEABLE WELLBORE(S)	TRACT PRODUCTION	% OF TOTAL PRODUCTION	
21 - 1	33.20	0.294083%	0	0.000000%	0	0.000000%	0.117633%
22 - 2	160.50	1.421695%	0	0.000000%	0	0.000000%	0.568678%
22 - 1	36.40	0.322428%	0	0.000000%	0	0.000000%	0.128971%
21 - 4	311.20	2.766583%	0	0.000000%	0	0.000000%	1.102633%
22 - 3	852.70	7.553143%	1	7.692308%	0	0.000000%	3.790488%
22 - 4	183.10	1.621884%	0	0.000000%	0	0.000000%	0.648754%
28 - 1	228.90	2.027576%	0	0.000000%	0	0.000000%	0.811031%
27 - 2	918.30	8.134222%	0	0.000000%	0	0.000000%	3.253689%
27 - 1	682.70	6.047298%	0	0.000000%	0	0.000000%	2.418919%
26 - 2	109.30	0.968170%	0	0.000000%	0	0.000000%	0.387268%
28 - 4	189.20	1.675917%	0	0.000000%	0	0.000000%	0.670367%
27 - 3	1074.00	9.513399%	1	7.692308%	117,597	24.831601%	16.990391%
27 - 4	964.80	8.546115%	1	7.692308%	55,018	11.617516%	9.996435%
26 - 3	299.00	2.648516%	0	0.000000%	0	0.000000%	1.059406%
33 - 1	385.50	3.414726%	1	7.692308%	1,162	0.245366%	2.257804%
34 - 2	1021.00	9.043930%	1	7.692308%	54,016	11.405935%	10.089770%
34 - 1	850.10	7.530112%	1	7.692308%	179,360	37.873381%	22.717966%
35 - 2	232.70	2.061237%	0	0.000000%	0	0.000000%	0.824495%
35 - 1	4.17	0.036938%	0	0.000000%	0	0.000000%	0.014775%
33 - 4	145.10	1.285283%	0	0.000000%	0	0.000000%	0.514113%
34 - 3	253.10	2.241938%	1	7.692308%	0	0.000000%	1.666006%
34 - 4	386.90	3.427127%	1	7.692308%	10,236	2.161418%	3.220790%
35 - 3	243.40	2.156016%	1	7.692308%	2,543	0.536976%	1.900125%
35 - 4	82.60	0.731664%	0	0.000000%	0	0.000000%	0.292665%
3 - 1	31.40	0.278138%	0	0.000000%	0	0.000000%	0.111255%
2 - 2	440.40	3.901025%	1	7.692308%	1,483	0.313148%	2.486215%
2 - 1	571.50	5.062298%	1	7.692308%	45,864	9.684571%	7.636436%
1 - 2	154.50	1.368548%	0	0.000000%	0	0.000000%	0.547419%
3 - 4	0.67	0.005935%	0	0.000000%	0	0.000000%	0.002375%
2 - 3	107.10	0.948683%	1	7.692308%	5,898	1.245413%	1.771410%
2 - 4	168.90	1.496102%	1	7.692308%	401	0.084675%	1.410009%
1 - 3	157.10	1.391578%	0	0.000000%	0	0.000000%	0.556631%
11 - 1	6.75	0.059791%	0	0.000000%	0	0.000000%	0.023916%
12 - 2	3.15	0.027902%	0	0.000000%	0	0.000000%	0.011162%
TOTAL:	11289.34	100.000000%	13	100.000000%	473,578	100.000000%	100.000000%

* Formula : (40 x Porosity-Acre-Feet) + (10 x Useable Wellbore(s)) + (50 x Twelve Months Production) = Tract Participation

Recorded and Verified
in Official Records of
COLLIER COUNTY, FLORIDA
DWIGHT E. BROCK, CLERK

ATTACHMENT 5

Photographs of Pad 4 at Raccoon Point Field

Raccoon Point Pad 4

SECTION 28,
TOWNSHIP 51 SOUTH,
RANGE 34 EAST
COLLIER COUNTY, FLORIDA



NORTH
SCALE: 1" = 100'

★
EXISTING OIL WELL (34-5)
NAD 27 COORDINATES
N 605504.62
E 524756.70
NAD 27 LAT/LONG
25°59'58.350" N
80°55'28.658" W
GROUND ELEVATION = 11.26'

★
EXISTING OIL WELL (27-3)
NAD 27 COORDINATES
N 605281.16
E 524737.13
NAD 27 LAT/LONG
25°59'56.137" N
80°55'28.874" W
GROUND ELEVATION = 11.17'

North and the coordinate values shown
hereon are referenced to the East Zone
of the Florida State Plane Coordinate
System, NAD 27. Vertical values are
NAVD 88. Units are in feet.

Raccoon Point Field
Unitized by Agreement
Dated 30 September 1993

THIS IS NOT A SURVEY.

LOCATED IN SECTION 28,
TOWNSHIP 51 SOUTH, RANGE 34 EAST
PREPARED FOR: LAMPL HERBERT CONSULTANTS, INC
PROJECT: PAD 4 WELL SKETCH
THIS IS NOT A SURVEY



PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC.

475 SOUTH FIRST AVENUE
NATIONAL, FLORIDA 33509
PHONE: (615) 224-1100
FAX: (615) 224-1401

Project No.:	15466-3	No.		Date	8/31/10	Approved	JMC	REVISION	
Horiz. Scale:	1" = 100'	O.R.						Original Release	
DWG. Name:	15466-3-SP								
Drawn By:	GBA								
Field Bk / Pg.:	XX								

NOT VALID WITHOUT
THE SIGNATURE AND
THE ORIGINAL RAISED
SEAL OF A FLORIDA
LICENSED SURVEYOR
AND MAPPER.

Drawing # XXXX

ATTACHMENT 6

Sketch of Rig Layout on Pad 4



Typical Rig Layout

Pad 4 – Raccoon Point Field

ATTACHMENT 7

Hydrogen Sulfide Safety Plan

November 18, 2010

John A. Coates, P.E.
Deputy Director
Florida DEP, Division of Water Resource Management
2051 East Paul Dirac Drive, MS 715
Tallahassee, FL 32310

RE: Revision #2 to Hydrogen Sulfide Contingency Plan #001 for Breitburn Florida LLC for Permit 1149AHL at Raccoon Point Field

Dear Mr. Coates:

Total Safety is the contractor that has been on location at Raccoon Point for the drilling of wells under permits 1331 and 1333. Our field personnel have provided continuous monitoring of the area for the presence of hydrogen sulfide gas during these two wells and have found no significant amounts in the produced gas. The only elevated amounts of hydrogen sulfide occur in the production tanks on Pad 2 and those operations are covered under a separate contingency plan for these facilities.

We believe that the previous monitoring and production from wells drilled from Pad 4 has documented that there is no hydrogen sulfide safety threat at the Pad 4 location proposed for the 2-3 redrill. The entire geologic column into the reservoir from Pad 4 has been drilled four times from this pad and no hydrogen sulfide was encountered down to the base of the Trinity (top of Lake Trafford formation) immediately above the Sunniland producing zone.

The proposed revisions to the plan are as follows.

1. Use the base of the Trinity (top of Lake Trafford formation) as the depth to begin active monitoring estimated at ~11,320' TVD depth, and;
2. Provide 6 SCBA 30-minute packs and 20 Bag Type 10-minute escape units.

Presently, under version #001 the plan goes into effect at 10,000 feet TVD; and we have more SCBA units in the existing plan than are needed for this work.

Sincerely,

Steve Brown
Business development Manager

Ensuring the safe Wellbeing of Workers Worldwide (W³)



HYDROGEN SULFIDE CONTINGENCY PLAN

BREITBURN FLORIDA, LLC

Permit 1149AHL

H₂S Contingency Plan # 002

Precision

This H₂S Contingency Plan is subject to updating

November 16,2010

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I. INTRODUCTION

This H₂S Contingency Plan will go into effect at the top of the expected or unknown hazardous H₂S zone. This plan will go into effect at 11,300 feet TVD.

To be effective, the plan requires the cooperation and effort of each person participating in the drilling of an H₂S well. Each person must know his/her responsibilities and all emergency and safety procedures. He/she should thoroughly understand and be able to use with accuracy, all safety equipment while performing his/her normal duties, if the circumstance should arise. He/she should therefore familiarize himself/herself with the location of all safety equipment and check to see that it is properly stored, easily accessible at all times, and routinely maintained.

It is the intention of BreitBurn Florida, LLC and the Drilling Contractor to make every effort to provide adequate safeguards against harm to persons on the rig and in the immediate vicinity from the effects of hydrogen sulfide, which may be released into the atmosphere under emergency conditions. However, the initiative rests with the individual in utilizing the safeguards provided. The ideas and suggestions of the individuals involved in the drilling of this well are highly welcomed and act as a fundamental tool for providing the safest working conditions possible.

The drilling representative is required to enforce these procedures. They are set up for your safety and the safety of all others.

II. PURPOSE

It is BreitBurn's intent to provide a safe working place, not only for its employees, but also for other contractors who are aiding in the drilling of this well. The safety of the general public is of utmost concern. All precautions will be taken to keep a safe working environment and protect the public.

There is a possibility of encountering toxic hydrogen sulfide gas. Safety procedures must be adhered to in order to protect all personnel connected with the operations as well as people living within the area.

The BreitBurn representative will enforce all aspects of the H2S Contingency Plan. This job will become easier by a careful study of the following pages and training and informing all personnel on location their duties and responsibilities.

A. OPERATING PROCEDURES

GENERAL:

Before this H₂S contingency plan becomes operational, the drilling contractor's personnel, necessary service personnel, and the operator's personnel shall be thoroughly trained in the use of breathing equipment, emergency procedures, and responsibilities. The H₂S Safety Contractor shall keep a list of all personnel who have been through the on-site H₂S training program at the drill site.

All personnel shall be given H₂S training and the steps to be taken during H₂S conditions under which the well may be drilled. General information will be explained about toxic gases, as well as the physiological effects of H₂S and the various classified operating conditions. In addition, the reader will be informed of his/her general responsibility concerning safety equipment and emergency procedures.

The H₂S Safety Contractor shall make available the H₂S Contingency Plan for all personnel to read and understand it thoroughly.

Without exception, all personnel on the drill site must proceed directly to the H₂S Safety Contractor for location and/or assignment of breathing apparatus. An instruction and orientation briefing will also be held.

B. PROCEDURES TO BE INITIATED PRIOR TO REACHING 1000' ABOVE THE H₂S BEARING ZONE:

A list of emergency phone numbers and contacts will be on location and posted at the following locations:

1. BreitBurn's Representative's Office
2. Drilling Contractor's, Toolpusher Office
3. Living Quarters Area

All safety equipment and H₂S related hardware must be set up as required by BreitBurn with regard to location of briefing areas, breathing equipment, etc. All safety equipment must be inspected daily with particular attention to resuscitators and breathing equipment.

All personnel on the drill site will be assigned breathing apparatus. Operator and drilling contractor personnel required to work in the following areas will be provided with breathing equipment connected to a cascade bottled air supply:

1. Rig Floor
2. Mud Pits
3. Derrick
4. Shale Shaker
5. Cellar

The H₂S Safety Contractor will be responsible for rigging up and monitoring all H₂S continuous monitoring-type detectors. These units must be tested and recalibrated by the H₂S Safety Contractor during drilling conditions. In the event H₂S is detected, or when drilling in a zone containing H₂S, the units shall be bump tested at least once every 24 hours. A calibration log will be kept on location. All results will be reported to the BreitBurn Company Representative.

C. DRILLING BELOW CONTINGENCY PLAN DEPTH

Blowout drills will be held as often as necessary to acquaint the crews and service company personnel of their responsibilities and the proper procedures to shut-in a well. After the BreitBurn representative is satisfied with blowout drill procedures, a drill will be conducted weekly with each crew. The H₂S Safety Contractor will be on duty prior to reaching contingency plan depth or as otherwise deemed necessary. He/she will conduct safety talks and drills, maintain the safety equipment, consult and carry out the instructions of the drilling supervisor. All personnel allowed on the drill site during drilling or testing operations will be instructed in the use of breathing equipment until supervisory personnel are satisfied that they are capable of using it.

After familiarization, each person must perform a drill with breathing equipment. The drill should include getting the breathing equipment, donning the breathing apparatus. A record shall be kept of all personnel drilled and the date of the drill.

Rig crews and service company personnel shall be made aware of the location of spare air bottles, resuscitation equipment, portable fire extinguishers, H₂S monitors and detectors. Knowledge of the location of the H₂S monitors and detectors are vital in determining as our gas location

and the severity of the emergency conditions. In addition, key personnel shall be trained in the use of a resuscitator.

After H₂S has been initially detected by any device, all areas of poor ventilation shall be inspected periodically by means of a portable H₂S detector instrument.

D. PROCEDURES PROGRAM

1. Drill Site
 - a. The drilling rig will be located to allow prevailing winds to blow across the reserve pit.
 - b. Safe Briefing Areas will be provided with a safety equipment trailer at the Primary Area. A Breathing air cascade system will be available at the Secondary Area. Personnel will assemble at the most up-wind station under alarm conditions, or when so ordered by the BreitBurn representative, the Contractor representative, or the H₂S Safety Contractor. Windsocks or streamers will be anchored to various strategic places on a pole about 30 feet high, so it is in easy view from the rig floor at all times.
 - c. Warning signs will be posted on the perimeters. “No Smoking” signs will be posted as well.
 - d. One multi-channel automatic H₂S monitor will be provided by the H₂S Safety Contractor and the detector heads will be located at the shale shaker, bell nipple, mud pits and on the rig floor and monitored there, or in the logging unit. Should the alarm be shut off to silence the sirens, the blinker light must continue to warn of H₂S presence. The safety representative will continuously monitor the detectors and will reactivate the alarm if H₂S concentrations increase to a dangerous level. Additional sensor/s will be located outside the living quarter’s area, as needed.
 - e. A method of escape will be open at all times.
 - f. Explosion-proof electric fans (bug blowers) will be positioned to insure adequate circulation at all critical locations. These fans are to be supplied by rig contractor.
 - g. If available, land line telephone service will be provided or cell phones provided. (Primary communications provided)

- h. A rig communication system will be provided, as needed.
- i. A gas trap, choke manifold, and degasser will be installed.
- j. A kill line, securely anchored and of ample strength, will be laid to the well-head from a safe location. This line is to be used only in an emergency.

General

- a. The BreitBurn representative and/or the Contractor's Toolpusher will be available at all times. The drilling supervisor, while on duty, will have complete charge of the rig and location operations and will take whatever action is deemed necessary to insure personnel safety, to protect the well, and to prevent damage.
- b. A Mud Engineer will be on location at all times when drilling takes place at the depth H₂S may be expected. The mud engineer will be able to verify the presence or absence of H₂S.

III. CONDITIONS AND EMERGENCY PROCEDURES

A. DEFINITION OF OPERATIONAL “CONDITIONS”

CONDITION I “POSSIBLE DANGER”

Warning Flags	Green
Alarms	No Alarm. Less than 10 ppm
Characterized By:	Drilling operations in zones that may contain hydrogen sulfide. This condition remains in effect unless H ₂ S is detected and it becomes necessary to go to Condition II.
General Action:	- be alert for a condition change - Check all safety equipment for availability and proper functioning. - Perform all drills for familiarization and proficiency

CONDITION II “MODERATE DANGER”

Warning Flags	Yellow
Alarms:	Actuates at 10 ppm. Continuous flashing light.
Characterized By:	Drilling operations in zones containing hydrogen sulfide. This condition will remain in effect until hydrogen sulfide can be neutralized by adding chemicals to the mud system or if it becomes necessary to go to Condition III
General Action:	- Be alert for a condition change - Check all safety equipment for availability and proper functioning. - Follow instructions. - All persons working in hazardous area will wear SCBA or work unit.

CONDITION III “EXTREME DANGER”

Warning Flags Red

Alarms Actuate at 15 ppm. Continuous Sirens and Flashing Lights

Characterized by: Critical well operations which pose an immediate threat of H₂S exposure to on-site personnel and a potential threat to the public.

General Action:

- a. Breathing Apparatus on.
- b. If not specifically designated to control the well, go to the appropriate safe briefing area.
- c. During any emergency, use the “buddy” system to prevent anyone from entering or being left in a gas area alone, even wearing breathing apparatus.
- d. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H₂S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases.
- e. Remain in safe briefing area and wait for instructions.
- f. If well is ignited do not assume area is safe. SO₂ is hazardous and not all H₂S will burn.

H₂S EMERGENCY PROCEDURES

A. Day To Day Drilling Operations

1. Upon discovering a release of H₂S gas in the ambient air by warning alarms or in any other way **Do Not Panic**.
2. Hold your breath and rapidly move up or across-wind away from the areas where H₂S sensing devices are in place, to the closest available breathing apparatus, don your mask, continue to use breathing apparatus until it has been determined that the exposure of H₂S gas in the ambient air no longer exists. **Do Not Panic!**

3. Utilize the “Buddy System”, i.e.; select and pair up each person participating in the drilling of an H₂S well prior to an emergency situation.
4. Help anyone who is overcome or affected by the H₂S gas by taking him/her up-wind out of the contaminated area.
5. Take necessary steps to confirm the release of the H₂S gas into the ambient air.
 - While wearing your self-contained breathing apparatus, determine by the read-out on the fixed monitor which sensing device has detected the release of the H₂S gas.
 - Utilize the hand-held sniffer type device at the particular sensing point disclosed on the fixed monitor to corroborate the fact that H₂S gas has actually been released. That is to rule out the possibility of a false alarm.
6. Refer to the Emergency Phone Numbers and call emergency personnel.
7. Take the necessary steps to suppress the release of H₂S gas into the ambient air. Comply with the BreitBurn’s Representative to physically suppress the release of H₂S gas at the actual release point.
8. Check all of the BreitBurn monitoring devices and increase gas monitoring activities with the portable hand-operated H₂S and gas detector units.

Do Not Panic!

The BreitBurn representative will assess the situation and with assistance of the Contractor’s Representative and the H₂S Safety Contractor will assign duties to each person to bring the situation under control.

Emergency Procedures at the Drilling Rig:

When the H₂S monitors activate the siren and blinker light, toxic gas is present. **Do Not Panic!**

- Put on your gas mask
- Render Assistance
- Follow Instructions

B. RESPONSIBILITIES OF WELL-SITE PERSONNEL

In the event of a release of potentially hazardous amounts of H₂S, all personnel will immediately proceed upwind to the nearest designated safe briefing area and put on their protective breathing apparatus. Consideration will be given to evacuating non essential personnel, as situation warrants.

1. BREITBURN FLORIDA, LLC'S Well-site Representatives

- a. If BreitBurn's well-site representative is incapacitated or not on location, this responsibility will fall to the Toolpusher/Driller.
- b. Immediately upon assessing the situation, set this plan into action by initiating the proper procedures to contain the gas and notify the appropriate people and agencies.
- c. Ensure that the alarm area indicated by the fixed H₂S Monitor is checked and verified with a portable H₂S detector.
- d. Consult Pusher/driller of remedial actions as needed.
- e. Ensure that non-essential personnel proceed to the safe briefing area.
- f. Ensure location entrance barricades are positioned. Keep the number of persons on location to a minimum during hazardous operations.
- g. Consult each contractor, service company, and all others allowed to enter the site, that H₂S gas may be encountered and the potential hazards that may exist.
- h. Authorize the evacuation of local residents if H₂S threatens their safety.
- i. Non essential personnel should be evacuated from location Situation warrants.

2. Toolpusher

- a. Toolpusher/Driller will assume responsibilities of BreitBurn well-site representative if that person is incapacitated or not on location.
- b. Ensure that the alarm area indicated by the fixed H₂S monitor is checked and verified with a portable H₂S gas detector.
- c. Confer with BreitBurn's well-site representative or superintendent and direct remedial action to suppress the H₂S and control the well.
- d. Ensure that personnel at the safe briefing area are instructed on emergency actions required.
- e. Ensure that personnel at the drill floor area are instructed on emergency actions required.
- f. Ensure that the appropriate safety and emergency procedures are observed by all personnel.
- g. Ensure that all persons are accounted for and provided emergency assistance as necessary.

3. Mud Engineer

- a. Run a sulfide check on the flowline mud.
- b. Take steps to determine the source of the H₂S and suppress it. Caustic and H₂S scavenger shall be added to the mud as necessary.

4. H₂S Safety Contractor

- a. Check and verify with a portable H₂S detector the alarm area indicated by the fixed H₂S monitor. Advise the Toolpusher/Driller and BreitBurn's well-site representative of findings.
- b. If H₂S is flared, check for sulfur dioxide (SO₂) near the flare as necessary. Take hourly readings at different perimeters, log readings and record on location.

- c. Ensure that personnel at the safe briefing area are instructed on emergency actions required.
- d. Ensure that explosion-proof bug blowers are positioned as necessary to disperse H₂S away from workers performing their job tasks. These will be provided by rig contractor.
- e. Ensure that the appropriate warning flags are displayed.
- f. Ensure that all personnel are in S.C.B.A. as necessary.
- g. Ensure that all persons are accounted for and provide emergency assistance as necessary.
- h. Be prepared to evacuate rig if order is issued.

5. General Personnel & Visitors

- a. If not specifically designated to control the well, go to the appropriate (upwind) safe briefing area. All non essential personnel should be evacuated, as situation warrants.
- b. During any emergency, use the “buddy” system to prevent anyone from entering or being left in a gas area alone, even wearing breathing apparatus.
- c. Provide assistance to anyone who may be injured or overcome by toxic gases. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering H₂S contaminated area.
- d. Remain in safe briefing area and wait for instructions.

C. INSTRUCTIONS FOR IGNITING THE WELL
“Only in the event of an uncontrolled release”

- 1. The Toolpusher/Driller will confer with BreitBurn’s well-site representative who will secure the approval of higher BreitBurn authority, prior to igniting the well, if at all possible.

The Toolpusher/Driller will be responsible for igniting the well in the event of severe well control problems. This decision should be made only as a last resort in situations where it is clear that:

- a. Human life and property are endangered, or
 - b. There is no hope of controlling the well under current conditions.
2. Once the decision has been made, the following procedures should be followed:
- a. Two people wearing self-contained breathing apparatus will be needed for the actual lighting of the well. They must first establish the flammable perimeter by using an explosimeter. This should be established at 30% to 40% of the lower flammable limits.
 - b. After the flammable perimeter has been established and everyone removed from the area, the ignition team should select a site upwind of the well from which to ignite the well. This site should offer the maximum protection and have a clear path for retreat from the area.
 - c. The ignition team should have safety belts and lanyards attached and manned before attempting ignition. If the leak is not ignited on the first attempt, move in 20 to 30 feet and fire again. Continue to monitor with the explosimeter and NEVER fire from an area with over 75% of the Lower Explosive Limit (LEL). If having trouble igniting the well, try firing 40 degrees to 90 degrees on either side of the well.
 - d. If ignition is not possible due to the makeup of the gas, the toxic perimeter must be established and evacuation continued until the well is contained.
 - e. All personnel must act only as directed by the person in charge of the operations.

NOTE: After the well is ignited, burning hydrogen sulfide (H_2S) will convert to sulfur dioxide (SO_2), which is also a highly toxic gas.

DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED

Normal Operations

1. Responsibilities of well-site personnel

a. Well-site Representative

1. Notify H₂S Safety Contractor of expected date to reach Contingency Plan implementation depth.
2. Ensure H₂S Safety Contractor completes rig-up procedures prior to reaching Contingency Plan effective depth.
3. Restrict the number of personnel at the drilling rig or well-site to a minimum while drilling, starting well work, testing or coring.
4. Ensure weekly H₂S drills/.training are performed.

B. Toolpusher

1. Ensure that necessary H₂S safety equipment is provided on the rig, and that it is properly inspected and maintained.
2. Ensure that all personnel are thoroughly trained in the use of H₂S safety equipment and periodic drills are held to maintain an adequate level of proficiency.

C. All Personnel (Including Visitors)

1. Remain clean-shaven. Beards and long sideburns do not allow a proper facepiece seal.

Receive H₂S safety training on location

Familiarize yourself with the rig's Contingency Plan.

2. Inspect and practice putting on your breathing apparatus.

3. Know the location of the “safe briefing areas”.
4. Keep yourself “wind conscious”. Be prepared to quickly move upwind and away in the event of any emergency involving release of H₂S.

D. The H₂S Safety Contractor

1. Conduct training as necessary to ensure all personnel are familiar with the contingency procedures and the operation of emergency equipment.
2. Check all H₂S safety equipment to ensure that it is ready for emergency use:
 - Check pressure daily for each shift on breathing apparatus (both 30-minute and hip-packs) to make sure they are charged to full volume.
 - Check pressure on cascade air bottles to see that they are capable of recharging breathing apparatus.
 - Check oxygen resuscitator to ensure that it is charged to full volume.
 - Check H₂S detectors daily for each shift (fixed and portable), and explosimeter, to ensure they are working properly.
3. Provide a weekly report to BreitBurn’s well-site representative documenting:
 - Calibrations performed on H₂S detectors.
 - Proper location and working order of H₂S safety equipment.
 - Attendance of all personnel, trained or retrained, and their company.
 - Weekly drills including list of personnel participating and summary of actions.

IV. SAFETY EQUIPMENT

All respirators will be designed, selected, used and maintained in conformance with ANSI Z88.2, American National Standard for respiratory protection.

Personal protective equipment must be provided and used. Those who are expected to use respiratory equipment in case of an emergency will be carefully instructed in the proper use and told why the equipment is being used. Careful attention will be given to the minute details in order to avoid possible misuse of the equipment during periods of extreme stress.

Self-contained breathing apparatus provides complete respiratory and eye protection in any concentration of toxic gases and under any condition of oxygen deficiency. The wearer is independent of the surrounding atmosphere because he/she is breathing with a system admitting no outside air. It consists of a full face mask, breathing tube, pressure demand regulator, air supply cylinder, and harness. Pure breathing air from the supply cylinder flows to the mask automatically through the pressure demand regulator which reduces the pressure to a breathing level. Upon inhalation, air flows into the mask at a rate precisely regulated to the user's demand. Upon exhalation, the flow to the mask stops and the exhaled breath passes through a valve in the face piece to the surrounding atmosphere. The apparatus includes an alarm & gauge which warns the wearer to leave the contaminated area for a new cylinder of air or cylinder refill.

To enable men/women to work in a toxic atmosphere for prolonged periods of time, a hose line with a quick connect can be added to the unit, thereby connecting it to a cascade system breathing air. The installation of a hose bank series of manifolds on the rig floor connected to a series of cascade bottles at a remote location, allows all personnel to remain with masks on for an extended period.

The derrickman is provided with a full face piece unit attached to a 5– minute escape cylinder, connected to one or more 300 cubic-foot air cylinders through a quick disconnect “T”. In case evacuation via trolley or ladder becomes necessary, he will also have a full bottle of air in his own self-contained breathing apparatus.

All respiratory protective equipment, when not in use, should be stored in a clean, cool, dry place, and out of direct sunlight to retard the deterioration of rubber parts. After each use, the mask assembly will be scrubbed with soap and water, rinsed thoroughly, and dried. Air cylinders can be recharged to a full condition from a cascade system.

Personnel in each crew will be trained in the proper techniques of bottle filling.

The primary piece of equipment to be utilized, should anyone be overcome by hydrogen sulfide, is the oxygen resuscitator.

When asphyxiation occurs, the victim must be moved to fresh air and immediately given artificial respiration. In order to assure readiness, the bottles of oxygen will be checked at regular intervals and an extra tank kept on hand.

Hand-operated pump-type detectors incorporating detector tubes will give more accurate readings of hydrogen sulfide. The pump-type draws air to be tested through the detector tube containing lead acetate-silica gel granules. Presence of hydrogen sulfide in the air sample is shown by the development of a dark brown stain on the granules, which is the scale reading of the concentration of hydrogen sulfide. By changing the type of detector tube used, this detector may also be used for sulfur dioxide (SO₂) detection when hydrogen sulfide (H₂S) is being burned in the flare area.

Provisions must be made for the storage of all safety equipment as is evident from the foregoing discussion. All equipment must be stored in an available location so that anyone engaged in normal work situations is no more than “one breath away” from a mask.

V. TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity ¹	PEL (OSHA) ² ppm	STEL ³ ppm	Lethal ⁴ ppm
Hydrogen Cyanide	HCN	0.94	10	150	300
Hydrogen Sulfide	H ₂ S 1.18		10	15	600
Sulfur Dioxide	SO ₂ 2.21		2	5	1000
Chlorine CL	2 2.45		1		
Carbon Monoxide	CO	0.97	35	200/1 hour	1000
Carbon Dioxide	CO ₂ 1.52		5000	5%	10%
Methane CH	4 0.55		90000	9%	Above 5%

¹ Air = 1.0

² **Permissible** - Concentration at which is believed that all workers may repeatedly be exposed, day after day, without adverse effect.

³ **STEL** - Short Term Exposure Limit.

⁴ **Lethal** - Concentration that will cause death with short-term exposure.

Reference: API RP-49, September 1974 - Reissued August 1978

VI. PROPERTIES OF GASES

A. CARBON DIOXIDE

1. Carbon Dioxide (CO₂) is usually considered inert and is commonly used to extinguish fires. It is 1.52 times heavier than air and will concentrate in low areas of still air. Humans cannot breathe air containing more than 10% CO₂ without losing conscience or becoming disorientation in a few minutes. Continued exposure to CO₂ after being affected will cause convulsions, coma, and respiratory failure.

2. The threshold limit of CO₂ is 5000 ppm. Short-term exposure to 50,000 ppm (5%) is reasonable. This gas is colorless, odorless, and can be tolerated in relatively high concentrations.

B. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H₂S) is a colorless, transparent, flammable gas. It is heavier than air and, hence, may accumulate in low places.

2. Although the slightest presence of H₂S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of H₂S.

CONCENTRATION			EFFECTS
% H ₂ S	PPM	GR/100 SCF ¹	
0.001	10	.65	Safe for 8 hours without respirator. Obvious and unpleasant odor.
0.0015	15	0.975	Safe for 15 minutes of exposure without respirator.
0.01	100	6.48	Kills smell in 3-15 minutes; may sting eyes and Throat.
0.02	200	12.96	Kills smell quickly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; Need prompt artificial respiration.
0.07	700	45.92	Rapid Unconsciousness; death will result if not Rescued promptly.
0.1	1000	64.80	Instant unconsciousness, followed by death within minutes.

¹ Grains Per 100 Cubic Feet

VII. Treatment Procedures for Hydrogen Sulfide Poisoning

- A. Remove the victim to fresh air.
- B. If breathing has ceased or is labored, begin resuscitation immediately.
Note: This is the quickest and preferred method of clearing victim's lungs of contaminated air; however, under disaster conditions, it may not be practical to move the victim to fresh air. In such instances, where those rendering first aid must continue to wear masks, a resuscitator should be used.
- C. Apply resuscitator to help purge H₂S from the blood stream.
- D. Keep the victim at rest and prevent chilling.
- E. Get victim under physician's care as soon as possible.

C. SULPHUR DIOXIDE

- 1. Sulfur Dioxide (SO₂) is a colorless, non-flammable, transparent gas.
- 2. SO₂ is produced during the burning of H₂S. Although SO₂ is heavier than air, it can be picked up by a breeze and carried downwind at elevated temperatures. Since SO₂ is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect. The following table indicates the toxic nature of SO₂:

CONCENTRATION		EFFECTS
% SO ₂	PPM	
0.0005	3 to 5	Pungent odor, normally a person can detect SO ₂ in this range.
0.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of eyes.
0.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, event with the first breath.

VIII. BREATHING AIR EQUIPMENT DRILLS FOR ON & OFF DUTY PERSONNEL

An H₂S Drill and Training Session must be given once a week to ALL on-duty personnel with off duty personnel. On-duty and Off-duty personnel will reverse roles on alternate drills. An H₂S drill and training session must be given once every 14 days to all off-duty personnel in coincidence with on-duty personnel reversing roles on alternate drills.

The purpose of this drill is to instruct the crews in the operation and use of breathing air and H₂S related emergency equipment and to allow the personnel to become acquainted with using the equipment under working conditions. The crews should be trained to put on the breathing air equipment within one minute after an H₂S emergency has been alerted.

The following procedure should be used for weekly drills. The BreitBurn supervisor must be satisfied that the crews are proficient with the equipment.

1. All personnel should be informed that a drill will be held.
2. The H₂S Safety Contractor should initiate the drill by signaling as he would if he detected H₂S.
3. Personnel should don their breathing apparatus.
4. Once the breathing air equipment is on, the H₂S Safety Contractor should check all personnel to insure proper operation.

A training and information session will be conducted after each drill to answer any H₂S related questions and to cover one or more of the following:

- Condition II, and III alerts and steps to be taken by all personnel.
- The importance of wind direction when dealing with H₂S.
- Proper use and storage of all types of breathing equipment.
- Proper use and storage of oxygen resuscitators.
- Proper use and storage of H₂S detectors (Mini Checks or equivalent).
- The "buddy system" and the procedure for rescuing a person overcome by H₂S.
- Responsibilities and duties.
- Location of H₂S safety equipment.
- Other parts of the "H₂S Contingency Plan" that should be reviewed.

NOTE: A record of attendance must be kept for weekly drills and training sessions.

IX. HYDROGEN SULFIDE TRAINING CURRICULUM

(FOR EMPLOYERS, VISITORS, AND CONTRACTORS)

EACH PERSON WILL BE INFORMED ON THE RESTRICTIONS OF HAVING BEARDS AND CONTACT LENS. THEY WILL ALSO BE INFORMED OF THE AVAILABILITY OF SPECTACLE KITS.

AFTER THE H₂S EQUIPMENT IS RIGGED UP, ALL PERSONNEL WILL BE H₂S TRAINED AND PUT THROUGH A DRILL. ANY DEFICIENCIES WILL BE CORRECTED.

Training Completion cards are good for one year and will indicate date of completion or expiration. Personnel previously trained on another facility and visiting, must attend a "supplemental briefing" on H₂S equipment and procedures before beginning duty. Visitors who remain on the location more than 24 hours must receive full H₂S training given all crew members. A "supplemental briefing" will include but not be limited to: Location, use and donning of an assigned respirator, familiarization with safe briefing areas, alarms with instruction on responsibilities in the event of a release and hazards of H₂S and (SO₂, if applicable). A training and drill log will be kept.

Topics for full H₂S training shall include, but not be limited to the following:

1. **Brief Introduction on H₂S**
 - A. Slide or VCR presentation (If Available)
 - B. H₂S material will be distributed
 - C. Re-emphasize the properties, toxicity, and hazards of H₂S
 - D. Source of SO₂ (if applicable)
2. **H₂S Detection**
 - A. Description of H₂S sensors
 - B. Description of warning system (how it works & it's location)
 - C. Actual location of H₂S sensors
 - D. Instruction on use of pump type detector (Gastec)
 - E. Use of card detectors, ampoules, or dosimeters
 - F. Use of combustible gas detector
 - G. Other personnel detectors used
 - H. Alarm conditions I & II,
 - I. SO₂ alarms (if applicable)

3. **H₂S Protection**
 - A. Types of breathing apparatus provided (30-minute SCBA & SKA PAK with voice diaphragms for communication)
 - B. Principle of how breathing apparatus works
 - C. Demonstration on how to use breathing apparatus
 - D. Location of breathing apparatus
4. **Cascade System**
 - A. Description of cascade system
 - B. How system works
 - C. Cascade location of rig with reference to briefing areas
 - D. How to use cascade system (with SKA PAKS & refill)
 - E. Importance of wind direction and actual location of windsocks
 - F. Purpose of compressor/function (if one is on site)
5. **H₂S Rescue and First Aid**
 - A. Importance of wind direction
 - B. Safe briefing area
 - C. Buddy system
 - D. H₂S symptoms
 - E. Methods of rescue
6. **Hands on Training**
 - A. Donning/familiarization of SCBA
 - B. Donning/familiarization of SKA PAK
 - C. Familiarization of cascades
 - D. Use of O₂ resuscitator
 - E. Alarm conditions - upwind briefing areas, etc...
 - F. Duties and responsibilities of all personnel
 - G. Procedures for evacuation
 - H. Search and Rescue teams
7. **Certification**
 - A. Testing on material covered

H₂S SAFETY PERSONNEL FITNESS TEST

X. EMPLOYEE INFORMATION

Employee Name:_____ Date:_____

Date of Employee Medical Evaluation:_____

Medical Status (circle): Unrestricted Limitations on Use Use Not
Authorized

RESPIRATOR INFORMATION

Respirator Type (Dustmask, SCBA, etc):_____

Brand:_____

Size: (circle): XS S M L XL

FIT TEST INFORMATION

Type of Fit Test Performed:

Quantitative

Porta Count
Fittestest 3000

Fit Factor:_____

Fit Factor:_____

Qualitative

Irritant Smoke
Isoamyl Acetate (Banana Oil)
Saccharin
Bitrex

Passed / Failed

Passed / Failed

Passed / Failed

Passed / Failed

I hereby certify that this fit test was conducted in accordance with the OSHA Fit Testing Protocols found in Appendix A of 1910.134.

Fit Tester Name (Print):_____

Signature:_____ Date:_____

XI. H₂S SAFETY SERVICES (This is just a sample)

HYDROGEN SULFIDE SAFETY PACKAGE

RESPIRATORY SAFETY SYSTEMS

QTY DESC RIPTION

30	30-Minute Pressure Demand SCBA w/Pigtail
10	Hose Line Work Units w/Escapes Cylinder
2	8-Bottle Cascades of Breathing Air (Loc near bottom rig structure)
1	8-Bottle Cascade of Breathing Air (Loc #2 SBA)
1	Safety Trailer w/6-Bottle Cascade of Breathing Air (Loc #1 SBA) (Trailer to contain/store misc safety equipment listed herin)
5	Regulators
4	100' Low Pressure Hose Lines (Derrick and rig up work areas)
4	50' Low Pressure Hose Lines (Floor & mud tank area)
10	25' Low Pressure Hose Lines (Floor, mud tank, shaker, work areas)
24	3'-5' Low Pressure Hose Line Pigtails at SBA's
3	8' SS Refill Lines (Two loc #1 SBA & 1 loc #2 SBA)
2	12-Man Reserve Manifolds (1 loc at #1 SBA & 1 loc at #2 SBA)
3	5 or 6-Man Reserve Manifolds (Rig Floor and Driller)
4	3-Man Reserve Manifolds (1-derrick, 2-mud pit area, 1-shaker area)
1	Oxygen Resuscitator w/Spare Cylinder

DETECTION AND ALARM SAFETY SYSTEM

1	H2S Fixed Monitor w/8 Channel Rack (Loc determined at rig up) suggested: (2-mud pit area, 1-shaker area, 1-bell nipple area, 1-floor/driller area, & quarters)
1	Monitor Stand, if needed
8	H2S Controllers for Fixed Monitor (2 spare if not multi channel)
8	H2S Sensors for Fixed Monitor (2 spare)
3	Explosion Proof Alarms (Light and Siren)
2	Indoor Alarms (For Live in and Company Rep Trailers, as needed)
2	Portable Electronic Hand Held H2S Monitors
1	Portable Tri-Gas Hand Held Meter (O2, LEL, H2S)
1	Sensidyne/Gastech Manual Pump Type Detector
8	Boxes H2S Tubes Various Ranges
4	Boxes SO2 Tubes Various Ranges
1	Calibration Gas
1	Set Paper Work For Records: Training, Cal, Inspection, other

ADDITIONAL SAFETY RELATED EQUIPMENT

QTY DESCRIPTION

3	Windsocks with Pole and Bracket
1	Megaphone (Bullhorn) w/Spare Batteries
1	Set Well Condition Sign w/Green, Yellow, Red Flags
1	Primary and Secondary Safe Briefing Area Signs
6	Operating Condition Signs for Work Areas & Living Quarters
1	Flare Pistol, w/Flares
4	White Marker Boards with Erasers and Markers
4	Notepads and Pencil Sets
30	Delmar H2S Mini Spot Checks or Equivalent
2	Portable Yellow Flashing Lights
3	Flashlights w/Spare Batteries
1	Safety Harness w/150' Safety Line
1	Eye Wash Kit
1	Litter
1	First Aid Kit, 24 Piece
	Spec Kit Upon Request
1	Rig up Box (or trailer) with Supplies and Spares

Compressor will only be provided, if determined needed on location

XII. EMERGENCY PHONE NUMBERS

BreitBurn	Office Phone	Cell Phone
BreitBurn	239-657-2171 239-707-7988	239-250-6917 239-707-3999

Rig Company

To be named		

HYDROGEN SULFIDE SAFETY CONTRACTOR

Total Safety 5237 Halls Mill Rd Bldg. J Mobile, AL 36695	Phone: 800-833-2974 Fax: 251-666-4350	
Total Safety 5749 Hwy 90 East Broussard, LA 70518	Phone: 800-824-4250 Fax: 337-837-1064	

HOSPITALS (911)

EMT determined	911	911
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AMBULANCE SERVICES (911)

Emergency Medical Services 2705 south Horseshoe Dr Naples FL 34104	239-252-8459 911	
Air Ambulance America	800-827-0745	
A ACLS advanced Air Ambulance	800-633-3590	
Angel Medflight World Air Ambulance	866-694-9310	

GPS Coordinates for rig location:

25° 59' 56" N

80° 55' 28" W

Florida Highway Patrol

Florida Highway Patrol 3205 Beck Blvd. Naples FL 34114	239-354-2377	911
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Local Law Enforcement (Sheriff and Police)

Collier County Sheriff's Office	239-774-4434	911
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Fire Department

Big Cypress National Preserve 33100 Tamiami Trail East Ochopee, FL 34141	239-695-2000 800-788-0511	911
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State Agencies

Tallahassee Office Florida DEP/Bureau of Mine Reclamation Oil & Gas Section 2051 East Paul Dirac Dr./M.S.715 Tallahassee, FL 32310 CONTACTS: Ed Garrett Professional Geologist/Administrator Steve Spencer Professional Geologist Dave Taylor Geophysical Operations Engineer Dot Black Secretary Specialist	Phone: 850-488-8217 V-Mail: 850-413-8192 Fax: 850-488-1254 Phone: 850-488-8217 Ext 12 Phone: 850-488-8217 Ext 65 Phone: 850-488-8217 Ext 26 Phone: 850-488-8217 Ext 23
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State Offices (Con't)

Ft. Myers Field Office Florida DEP/Bureau of Mine Reclamation 2295 Victoria Avenue, Suite 179 Ft. Myers, Florida 33901 CONTACTS: Paul Attwood Professional Geologist	Phone: 239-338-2362 Fax: 239-338-2315 Cell: 239-229-4293 Home: 239-947-4348
OSHA Regional Office 61 Forsyth St, SW Atlanta, Georgia 30303 Fort Lauderdale Area Office 8040 Peters Road, Building H-100 Fort Lauderdale, Florida 33324	Phone: 404-562-2300 Fax: 404-562-2295 Phone: 954-424-0242 Fax: 954-424-3073
U.S. Environmental Protection Agency Region 4 Sam Nunn Atlanta Federal Center 61 Forsyth St, SW Atlanta, GA 30303-8960	Phone: 404-562-9900 Fax: 404-562-8174 Toll Free: 800-241-1754
National Response Center Toxic Chemical & Oil Spills	Phone: 800-424-8802

XIII. EVACUATION OF THE GENERAL PUBLIC

The procedure to be used in alerting nearby persons in the event of any occurrence that could pose a threat to life or property will be arranged and completed with public officials in detail, prior to drilling into the hydrogen sulfide formations.

In the event of an actual emergency, the following steps will be immediately taken:

1. The BreitBurn representative will dispatch sufficient personnel to immediately warn each resident and transient down-wind within radius of exposure from the well site. Then warn all residents in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants.
2. The BreitBurn representative will immediately notify proper authorities, including the Sheriff's Office, Highway Patrol, and any other public officials as described above and will enlist their assistance in warning residents and transients in the calculated radius of exposure.
3. The BreitBurn representative will dispatch sufficient personnel to divert traffic in the vicinity away from the potentially dangerous area. A guard to the entrance of the well site will be posted to monitor essential and non essential traffic.
4. General:
 - A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.
 - B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. BreitBurn will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

- C. BreitBurn will attempt to have appropriate management personnel at the disaster site as soon as possible. The company's personnel will cooperate with and provide such information to civil authorities as they might require.
- D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S . A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

XIV. DIRECTIONS TO WELLSITE:

The rig is located on Pad 5 in the Raccoon Point Field and is accessed by a limited access road (11-Mile Road) off of US 41 in eastern Collier County. The location is shown on the accompanying map below.

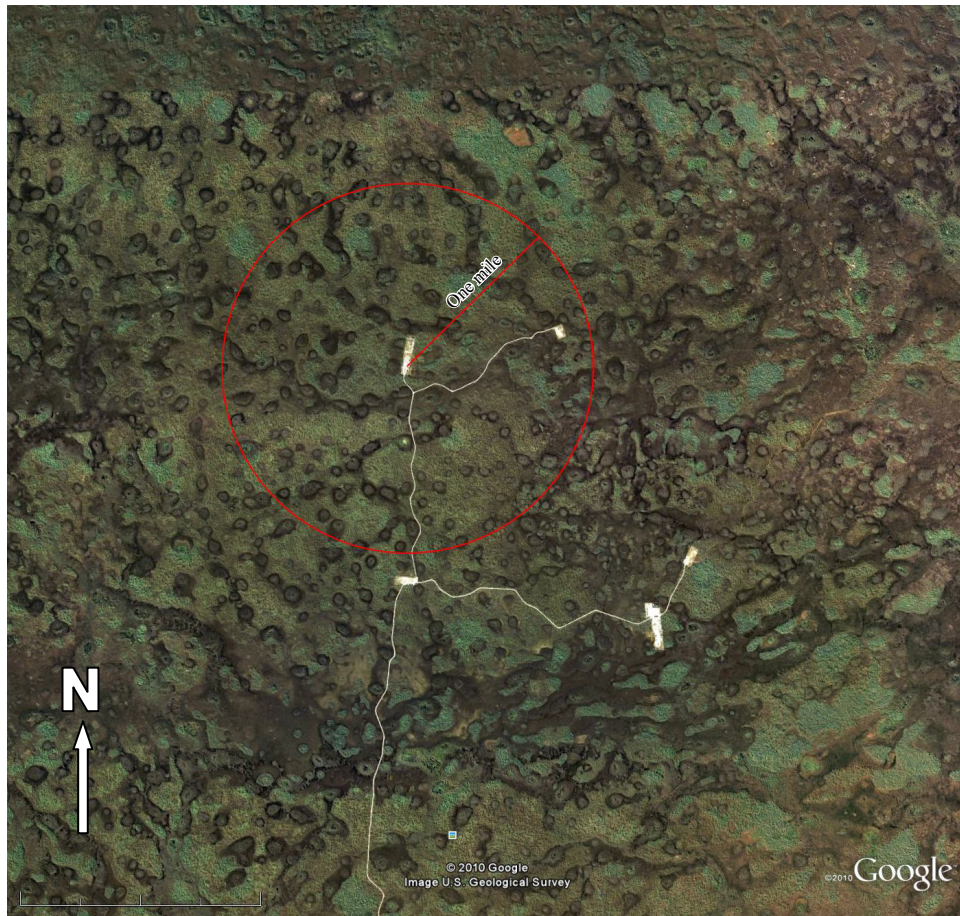


XV. LOCATION RIG LAYOUT:



Typical Rig Layout
Pad 4 - Raccoon Point Field

XVI. ROE MAP (RADIUS OF EXPOSURE)



XVII. RESIDENCE LIST WITHIN RADIUS OF EXPOSURE
(PEZ) PRIMARY EVACUATION ZONE

Other than oilfield personnel employed by BreitBurn and Big Cypress National Park Personnel in the vicinity on official business, there are no residences within one mile of the well site.

XVIII. OTHER: NOTES:

ATTACHMENT 8

Precision Drilling; Rig 314 Information

RIG 314

CLASSIFICATION: NOI SK 150
SCR

DRILLING DEPTH CAPACITY: 17,000'

POWER SYSTEM:

Three (3) Caterpillar D3512B engines with Kato 1365 KW AC generators, and Ross Hill SCR, Model 1400, three (3) bays to power pumps, drawworks and lighting plus hotel load.

DRAWWORKS:

NOI 150DL with Eaton brake
Driven by two (2) 1,000 HP G.E. 752 DC traction motors.

MAST:

NOI 136' x 13' base, 710,000# static hook load

DRILL LINE:

1-3/8" EIPS

SUBSTRUCTURE:

NOI 25' high floor, 735,000# casing capacity with 400,000# setback capacity, 21' clear height from rotary beam to ground level.

MUD PUMPS:

Two (2) Gardner Denver PZ-10 triplex pumps rated at 1,350 HP, each driven by two (2) 1,000 HP G.E. 752 DC traction motors.

ROTARY:

Continental Emsco T2750, 27 1/2"

CROWN BLOCK:

NOI with six (6) sheaves

TRAVELING BLOCK AND HOOK:

National 350 ton UTB with 350 hook

SWIVEL:

Nation al P-400

DRILL PIPE:

5" OD

DRILL COLLARS:

8 inch and 6 1/2 inch
(Quantities to be determined)

KELLY:

5-1/4" Hex x 40'

ANNULAR PREVENTERS:

Hydril GK 13 5/8" x 5,000 psi WP

RAM PREVENTERS:

Shaffer Type SL, double ram 13 5/8" x 10,000 psi WP, H2S trim
Shaffer Type SL, single ram, 13 5/8" x 10,000 psi WP, H2S trim

CHOKE MANIFOLD:

Cameron 4-1/16" x 3-1/16" 10,000 psi WP, dual chokes

ACCUMULATOR SYSTEM:

Koomey type 80, seven (7) station, with 165 gallon capacity with dual air pumps and one (1) electric triplex pump

MUD TANK SYSTEM:

Two (2) tank 1,000 BBL total
Two (2) Derrick Flo-line cleaners Model 513
Mud agitators
NOI two (2) 10" cone desander
NOI twelve (12) 5" cone desilter
NOI vacuum degasser

MUD MIXING PUMPS:

Two (2) 5" x 6" centrifugal pumps driven by 75 HP electric motor

AUXILIARY EQUIPMENT:

Toolpusher and crew quarters
One (1) 500 BBL water tank
One (1) 19,000 gallon fuel tank
Automatic driller
Two (2) hydraulic hoist
Pipe spinner
MD Totco EDR
One (1) Mathey (Surveyor) wireline unit
0 - 7 degree drift indicator (standard only)



REV. 2 Aug 01

ATTACHMENT 9

Form 3 – Application for Permit to Drill

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR PERMIT TO DRILL
PERMIT 1149AHL

Form 3
Rule 62C-25.008, -25.006,
-25.003 and -25.001

For information and fees regarding drilling permits for oil and gas related wells, refer to Chapter 62C-26, Florida Administrative Code. File this form with the Chief, Florida Geological Survey, 903 West Tennessee Street, Tallahassee, Florida 32304-7700 (phone numbers 850/487-2219 and 488-4191; fax 850/488-8086).

BreitBurn Florida LLC
(Company's Name and Address)

515 South Flower Street, Suite 4800, Los Angeles CA 90071

Florida Address: P.O. Box 3236, Immokalee FL 34143

Phone Number: (239) 657-2171 Fax Number: (239) 657-3949

Well Name and Number: Collier Land and Cattle Corporation 27-3AHL

Ground Elevation: 11.17' NAVD88 Acres Assigned to Well: Unitized Latitude: 25 59 56 14 N Longitude: 80 55 28 87 W

SHL: N 605281.16 E 524737.13 (1,848' FSL and 795' FEL) Sec. 27 T. 51S R. 34E

BHL: N 603264.37 E 528253.92 (162' FNL and 2,703' FWL) Sec. 27 T. 51S R. 34E

Field/Area: Raccoon Point Field County: Collier

Distance to nearest drilling unit boundary: Unitized Field

Proposed Depth: 14,014' Measured Depth and 11,369' Vertical Depth

Do you have all of the mineral interest in the drilling unit under lease or title? If not, attach lease map showing ownership of all mineral acreage within the drilling unit and list the names and addresses of all nonconsenting mineral owners. (See section 377.2411 and .247, Florida Statutes.) YES

- (Please answer YES or NO) Is the structure intended for the drilling or production of this well located (See section 377.24, F. S.)
- a) in a municipality? NO
 - b) in tidal waters within 3 miles of a municipality? NO
 - c) on an improved beach? NO
 - d) on any submerged land within a bay, estuary, or offshore waters? NO
 - e) within one mile seaward of the coastline of the state? NO
 - f) within one mile seaward of the boundary of a local, state or federal park or an aquatic or wildlife preserve? NO
 - g) On the surface of a freshwater lake, river or stream? NO
 - h) within one mile inland from the shoreline of the Gulf of Mexico, the Atlantic Ocean or any bay or estuary? NO
 - i) within one mile of any freshwater lake, river or stream? NO

If the answer to a, b, or c is YES, attach copies of local governing authorities' permits. If the answer to h or i is YES, attach a contingency plan specifying safeguards being implemented to prevent accidents and/or blowouts and to protect the natural resources of such bodies of water and shore areas in the event of an accident or blowout.

The security for this well is ON FILE (attached or on file) with the Florida Geological Survey (see Rule 62C-26.002) and bears Serial Number .

=====

Company's Statement

State: Florida

County: Collier

I, Richard H. Stechmann, am the Asset Manager
(Name) (Title)

of BreitBurn Florida LLC and attest to all information contained herein to be true and correct.
(Organization)

Signature: R.H. Stechmann

Date: November 18, 2010

=====

File Number: Action: Date: A.P. I. Number:
(Approved, Denied)

ATTACHMENT 10

Proposed Drilling Program

BREITBURN FLORIDA, LLC

CL&CC 27-3AHL (re-drill)

Drilling Program

Updated: November 16th, 2010

THIS PROCEDURE IS TO SER VE AS A DETAILED GUIDELINE FOR THE D RILLING OF THIS WELL AND WILL BE REVIEWED AND MODIFIED WHEN REQUIRED A S DETERMINED BY ACTUAL WELL BORE CONDITIONS ENCOUNTERED IN THE DRILLING OPERATIONS. SAFETY AND PRUDENT DRILLING PRACTICES WILL TAKE PRIORITY AT ALL TIMES.

**Permit #1149AHL
BreitBurn Florida, LLC
Drilling Program
Raccoon Point
Collier County, Florida.**

Date: 11-16-2010

Well: Collier Land and Cattle Corporation 27-3AHL

Field: Raccoon Point

County: Collier

FDEP: 239 338-2362

AFE#:

AFE DHC:

API#:

Location: Section 28, T51S-R34E

@ Surface: Section 28, 1,848' FSL & 795' FEL Lat: 25°59'56.137 Long: -80°55'28.874

@ Start BH Lateral: Section 27, 854' FSL & 1,695' FWL

Lat: 25°59'46.22 Long: -80°55'01.48

Vertical Pilot Hole: 100' target radius.

Horizontal Lateral: 25' target radius.

Elevation: 11.17', ±36.17' RT (rotary table (top drive – no Kelly Bushing))

Proposed TD: ±11,306' TVD/ ±11,810' MD (Casing Point – no pilot)
±11,369' TVD/ ±14,014' MD (Lateral Hole)

Directions: From the Oasis Visitor Station go east 5 miles and turn left onto "11 Mile Road", the Breitburn Florida Raccoon Point Entrance. All Vehicles must have CB Radio's on Channel 13 and follow reporting procedures. Follow 11 Mile Road to Pad 4.

Procedure Summary:

- 1) Move in & Rig up Service Rig.
- 2) Finish R/U, N/D WH & N/U BOP's.
- 3) TOH with 3 ½" tubing.
- 4) Run Cement bond log from PBTD to 6,000'.
- 5) TIH w/ casing cutter on work string and cut casing above top of cement at ± 6,500'.
- 6) POOH and recover all casing above top of cut.
- 7) TIH and spot 800' cement plug on top of casing stub.
- 8) TIH w/ 9 5/8" casing scraper to 4000' & TOH
- 9) Run casing inspection log over the 9 5/8" intermediate casing
- 10) Evaluate and repair as necessary.
- 11) Pressure test 9 5/8" intermediate casing to 600 psi for 10 minutes.
- 12) N/U wellhead and rig down service rig.
- 13) MIRU drilling rig. Nipple up & Test BOP's
- 14) TIH and polish top of cement plug to ± 6,000'.
- 15) Run Gyro Survey to surface as required.
- 16) P/U Directional assembly & TIH to top of plug. Drill to plug departure.
- 17) Directionally Drill an 8 ¾" hole with MWD & directional steering assembly, build @ 3.5°/ 100' to 17°, drill tangent as per directional program to casing point at ± 11,306' TVD/ ±11,810' MD.
- 18) Run 7" casing to ± 11,810' MD and cement back to ± 8000' MD.
- 19) Drill out shoe joint & float shoe,

- 20) Directionally Drill 6" hole with a steerable assembly with 4 3/4" MWD/Smart motor to build angle @ 18°/ 100' and establish a 90° angle x ±135.00° azimuth by an EOB depth of ± 11,369' TVD/ ± 12,014' MD. Angle and direction will be maintained to ± 14,014' MD.

Casing Program:

Depth, MD	Depth TVD	Hole Size	Casing Size	WT, ppf	Grade	Thrd	Test Pressure	MU Torque
± 245'	± 245'	26"	20"	94	H	ST7C	NA	NA
± 2,180	± 2,180'	17 1/2"	13 3/8"	54.5	K-55	BT&C		
± 3,990'	± 3,990'	12 1/4"	9 5/8"	36	K-55	ST&C		
±11,810' ±11,306'		8 3/4"	7"	29.0	L-80	LT&C		
±14,014'	±11,369'	6.0"	Open Hole					

Anticipated Formation

Formation	Measured Depth (ft)	True Vertical Depth (ft)	Subsea Depth (ft)	Est Pore Pressure EMW (lbs/gal)	Remarks
Boulder - top	2,880	2,880			
Boulder - base	3,620	3,620			
Trinity C - marker					
Trinity C - FI top	11,734	11,262		9.3	
Trinity C - Fibase	11,755	11,274		9.3	
Trinity C - base	11,805	11,303			
Sunniland -Top	11,880	11,341		9.0	
Sunniland A	11,890	11,345		9.0	
Sunniland B	11,923	11,356		9.0	
Sunniland C	12,071	11,369		9.0	
Start of Lateral	12,014	11,369		9.0	
Total Depth*	14,014	11,369		8.6	

BOP PROGRAM:

Hole Size	Size/ Pressure	Bottom to Top Arrangement	Low - High Test Pressures Rams / Annular
8 3/4"	11" 5M	P/S/B/A	250 - 3,500 / 250 - 2,000
6.0"	11" 5M	P/S/B/A	250 - 3,500 / 250 - 2,000

P = Pipe Ram B= Blind Ram A= Annular S=Drilling Spool

The Company Man, Tool Pusher, and Driller will have current Well Control Certifications. Well Control will use the IADC accepted methods. This area is known more for Lost Circulation than for Kicks. Pictures of BOP's in Attachments.

CEMENT/ FLOAT EQUIPMENT & CENTRALIZATION:

Production

7" casing x 8 3/4" hole @±11,810' MD

Planned cement volume is based on 30% open hole excess, 3810' of annular fill.

Spacer: 75 bbls – 3 Fluids

Lead: 200 sacks HTLD Cement plus additives, mixed at 12.8 ppg w/8.73 gps mix water for a 1.86 cu.ft./sk yield.

Tail: 410 sacks Premium Cement plus additives, mixed at 16.2 ppg w/5.87 gps mix water for a 1.52 cu.ft./sk yield.

Use top and bottom plugs and displace at ± 7 bpm. Displace with Bacteriacide treated fresh water.

WELLHEAD PROGRAM:

<u>Nominal Size/Working Pressure</u>	<u>Hanger/ Packoff</u>	<u>Test Pressure</u>
16-3/4" 3M x 17 1/2" SOW type C-22-EG bradenhead	N.A.	770
16-3/4" 3M x 11" 5M type C-22 tubing head	11" x 7" C-22 hanger 9" x 7" PU packoff	1,300
<u>Dimensions:</u> "A" section: 16" x 16-3/4" 3M = $\pm 17-1/2"$ w/ 5" socket depth "B" section: 16-3/4" 3M x 11" 5M = $\pm 25"$		

DRILLING FLUIDS PROGRAM:

Hole Size	From Depth MD	To Depth MD	MW ppg	WL API/ HTHP	pH	Comments
8 3/4"	± 6,000'	± 9,000'	8.8 - 9.1	50-30	9.0 – 9.5	Freshwater (Gel, PHPA, Lime, & Lignite)
8 3/4"	± 9,000'	± 11,810'	8.8 - 9.2	40-25	9.0 – 9.5	Freshwater (Gel, PHPA, Lime, & Lignite)
6"	± 11,306' tvd ± 11,810' md	± 11,369' tvd ± 14,014' md	8.8 – 9.0	30 - 15	9.5 -10.0	Freshwater (Polymer, Calcium Carbonate, & bio fiber sweeps)

Notes:

- Utilize all available solids control equipment and run as fine of shaker screens as possible to minimize LGS and control mud weight.
- Beginning at ± 11,810' and continuing to 14,014' consider mixing & pumping ±30 bbl sweeps containing 5 ppb coarse & 5 ppb fine grind calcium carbonate as needed.

EVALUATION PROGRAM:

ROP/ Gas log (Well Data Mud Logging Unit on location and operational) from $\pm$ 10,500'.
Fax or e-mail log with morning and afternoon reports.

Electric Line (6" hole) Triple Combo, FMI, - not required.

SAMPLING PROGRAM:**State Requirements:**

Geologist to catch one (1) set of dry samples every 30' (hold at rig) from $\pm$ 10,500' to TD.

BreitBurn Requirements:

Geologist to catch one (1) set of dry samples every 30' (hold at rig) from $\pm$ 10,500' to TD

BIT PROGRAM:

<u>Bit No.</u>	<u>Size (inc ____ h)</u>	<u>Type</u>	<u>Depth Out, Ft</u>	<u>Rotary Hours</u>	<u>WOB</u>	<u>RPM</u>	<u>ROP</u>	<u>Target</u>	<u>Target C/R Hours</u>
1	8 3/4	PDC	$\pm$ 8,600	65	5/35	90/140	50	170	
2	8 3/4	PDC	$\pm$ 11,805	65	5/35	60/120	35	235	
3	6	HR-44	$\pm$ 14,014	78	5/35	60/120	28	313	

SURVEY PROGRAM:

Gyro survey from surface to kickoff point.

MWD surveys a minimum of every 100' to total depth.

SPECIAL INSTRUCTIONS:

1. Notify Florida Department of Environmental Protection in Fort Myers @ 239/ 338-2362. 24 hours prior to commencement of operations, prior to running and cementing production casing.
2. Run all solids control equipment continuously in the 8 3/4" hole sections. Run as fine of shaker screens as possible at all times.
3. RU gas detector, PVT , Flow-sho, hydraulic choke, mud-gas separator and all monitoring equipment and have operational from kickoff point. At 10,500' have ROP/ Gas log feature operational and fax or e-mail logs in with Morning and afternoon reports.
4. All cementing pump times to be checked by lab using location water and **field blend** cement samples. Use 175 deg F BHT (see cement program and have test results faxed to office **prior to all jobs**).
5. Run Hydraulics and fax to office prior to all bit runs below kickoff point.
6. Run jars with all drilling assemblies.

PROCEDURE

1. Move in and rig up Service Rig.
2. N/D wellhead and N/U BOP's
3. TOH L/D 3 1/2" tubing.
4. Run cement bond log from PBTD to 6,000'.
5. TIH w/ casing cutter on work string and cut casing above top of cement at $\pm 6,500'$,
6. POOH and recover all casing above top of cut.
7. TIH and spot 800' cement plug, minimum 16.4 ppg, on top of casing stub.
8. TIH w/ 9 5/8" casing scraper to 4000' & TOH w/ scraper.
9. Run casing inspection log over the 9 5/8" from shoe to surface.
10. Evaluate log and implement casing repairs as required.
11. TIH, testing tubing w/ Test Packer & set at casing shoe. Pressure test 9 5/8" casing to 600 psi for 10 minutes.
12. N.U wellhead and rig down service rig.
13. Move in and rig up Drilling Rig.
14. N/U & test BOP's
15. TIH and polish top of kickoff plug to $\pm 6,000'$. Drop gyro & POOH
16. Directionally Drill 8 3/4" hole with MWD & Rotary Steerable assembly, build @ 3.5°/ 100' to 17° and hold for tangent section. Drill while holding angle to $\pm 10,300'$, then increase angle with a build @ 3°/ 100' to 55°. Hold 55° to casing point at $\pm 11,810'$ MD / $\pm 11,306'$ TVD.
17. TOH, pickup stiff packed hole casing & reaming BHA assembly and RIH to TD. Wiper trip until string runs to bottom without problem. Circulate and condition mud for casing. R/U Lay down Machine. TOOH, L/D Drill Pipe, BHA and 8 3/4" bit.
18. R/U six man casing crew w/ 350 ton tools, stabbing board and rental bails (if necessary). P/U 7" Production Casing as follows.

Float Shoe (Threadlock)
2 jts 7", 29 ppf, L-80, LT&C casing (Threadlock)
Float Collar (Threadlock Pin and Box)
 ± 278 jts 7", 29 ppf, L-80, LT&C casing

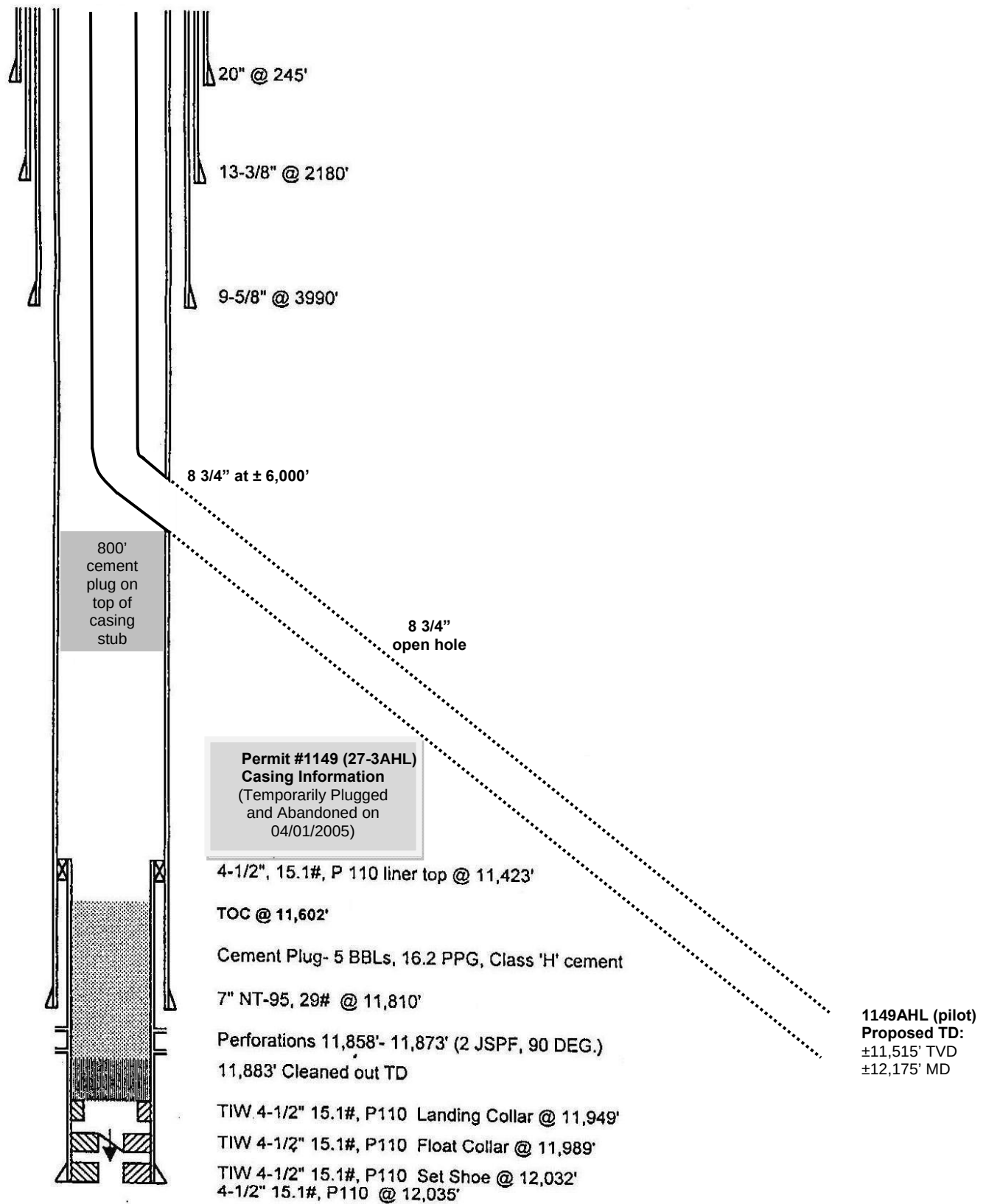
Centralize w/ rigid & bow type centralizers 6' above shoe, 6' above float collar. Run two rigid on bottom 3 joints & two bow spring turbo lizers above trinity flow zone, for a total of eight (8) centralizers (6 rigid, 2 bow spring turbo lizers and 2 stops).
Use top and bottom plugs and displace at ± 7 bpm with rig pump. Reciprocate casing w/ 5-10' Strokes. Leave cement (line capacity) above plugs for drillout. Land casing in slips and set seals. N/U & Test BOP's.

19. Cement as per program
20. Pressure test BOP's to meet FDEP requirements
21. P/U 6" bit and TIH. Tag cement.
22. Circ. Bottoms Up. Test 7" Casing to 1,500 PSI.
23. Drill cement and float equipment.
24. P/U 6" bit and steerable drilling assembly. TIH
25. Directionally drill 6" hole with a steerable assembly with 4 3/4" MWD/Smart motor to build angle @ 18°/ 100' and establish a 90° angle x ±135.0° azimuth by an EOB depth of ±12,014' MD / ± 11,369' TVD. Angle and direction will be maintained for length of Hz leg.
26. Drill Horizontal Leg to ±14,014' MD. Make Wiper Trips as needed.
27. Displace hole to produced water.
28. TOH, L/D work string and steerable BHA.
29. N/D BOP's
30. Install Dry Hole Tree.
31. R/D move rig.
32. Completion Procedure to follow.

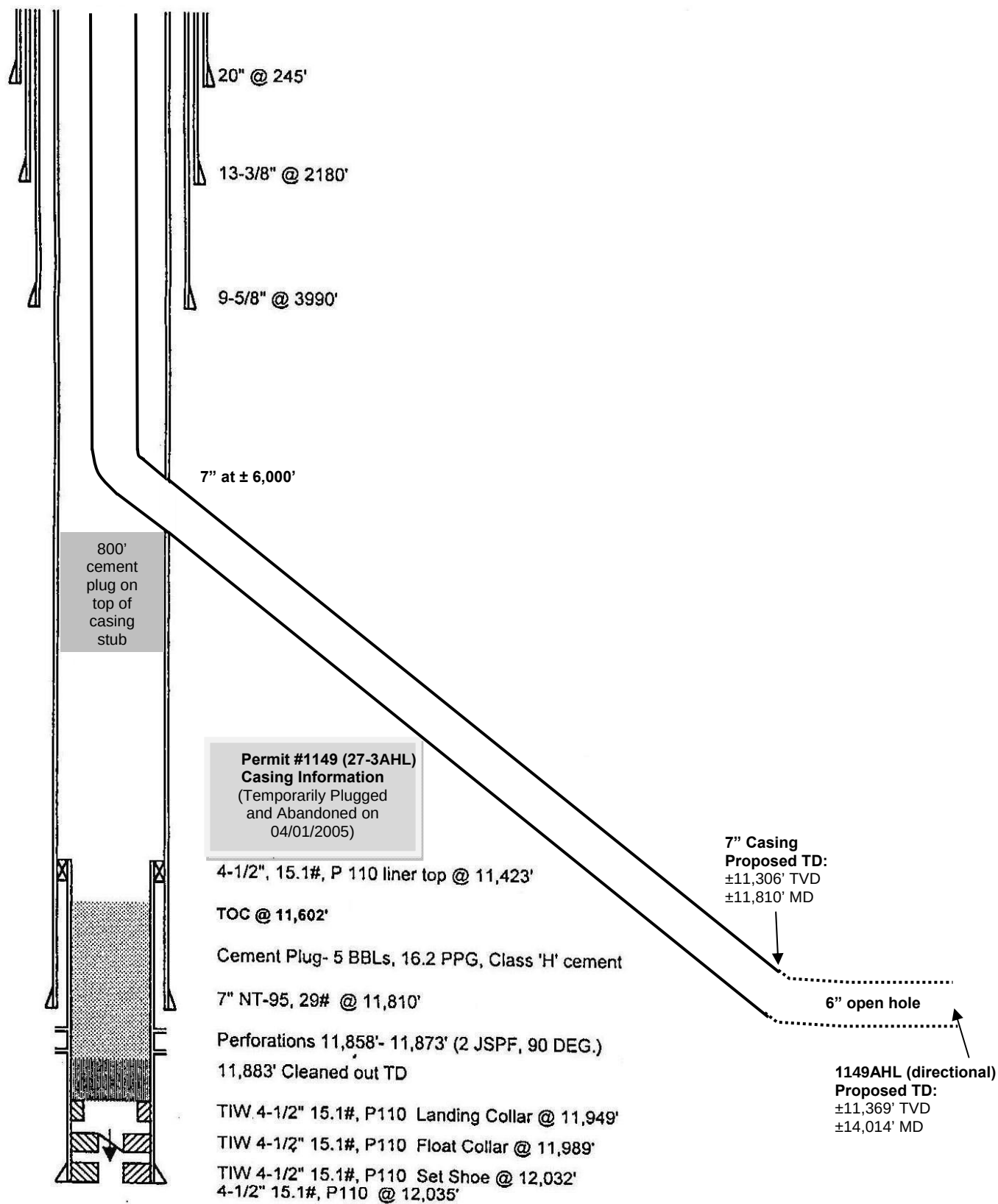
ATTACHMENT 11

Casing & Well Bore Schematic

Casing & Well Bore Schematic for 1149AHL (pilot)



Casing & Well Bore Schematic for 1149AHL (directional)



ATTACHMENT 12

Well Control Plan

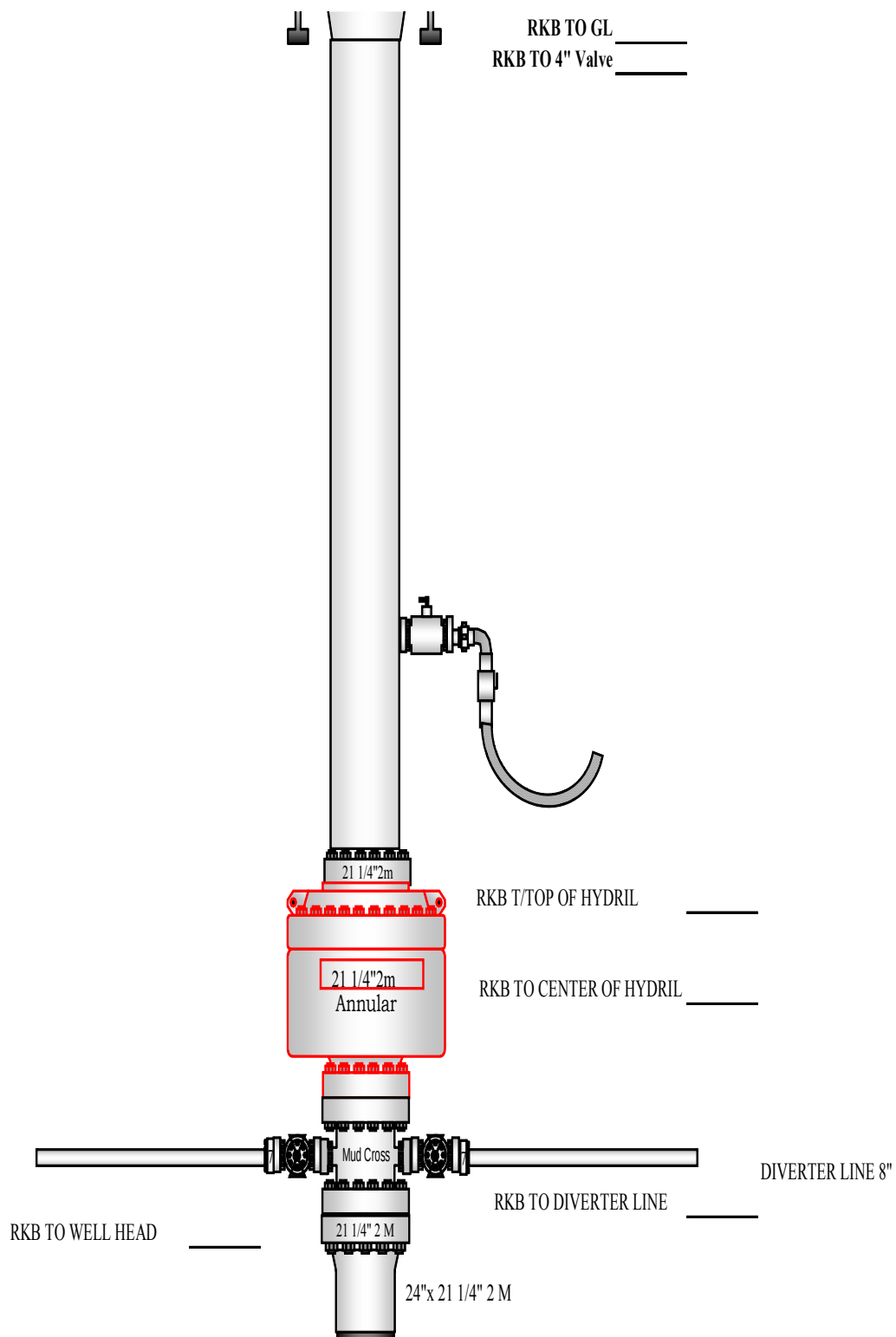
BREITBURN FLORIDA LLC - BOP WELL CONTROL PLAN:

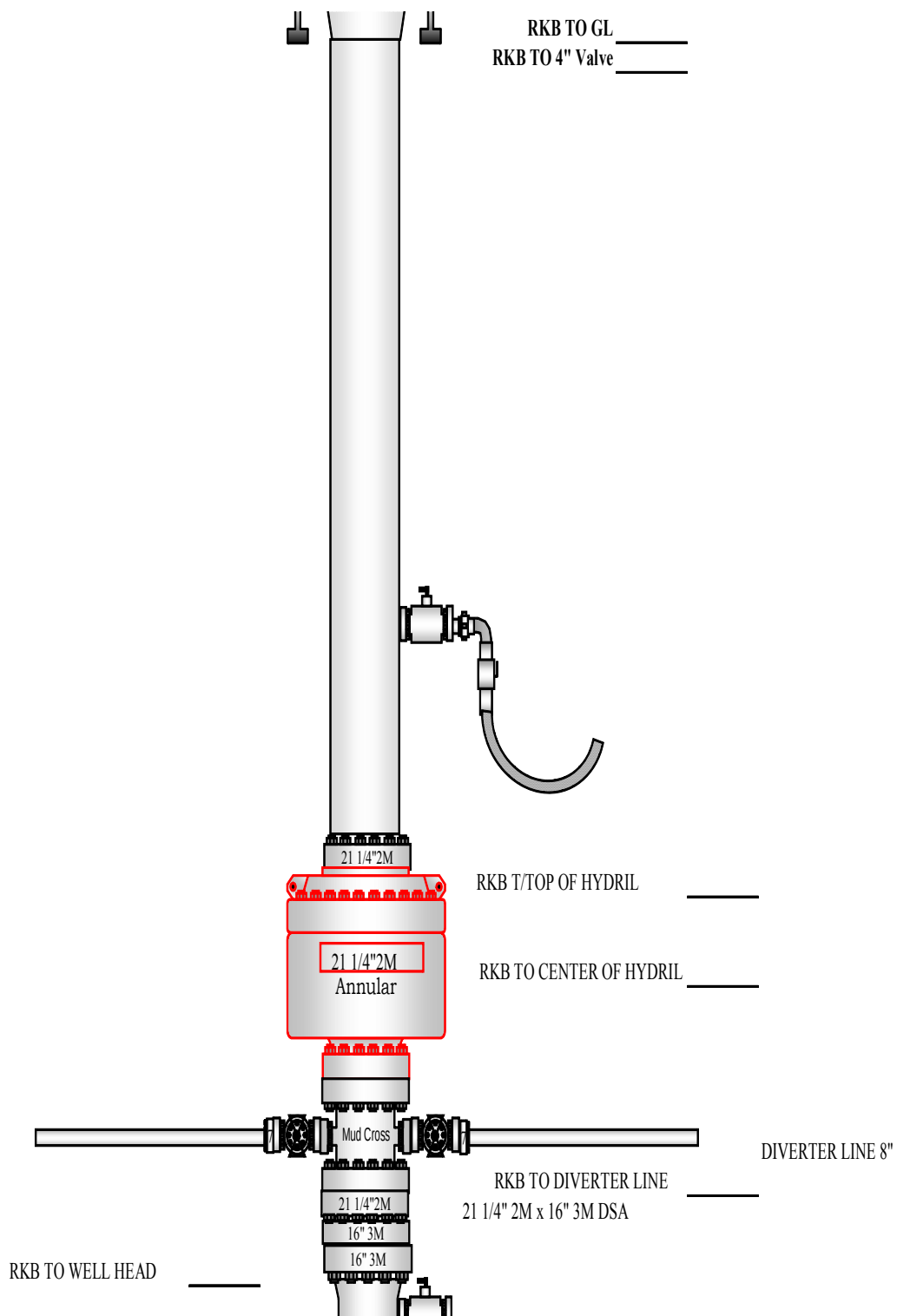
COLLIER LAND AND CATTLE CORPORATION 27-3AHL

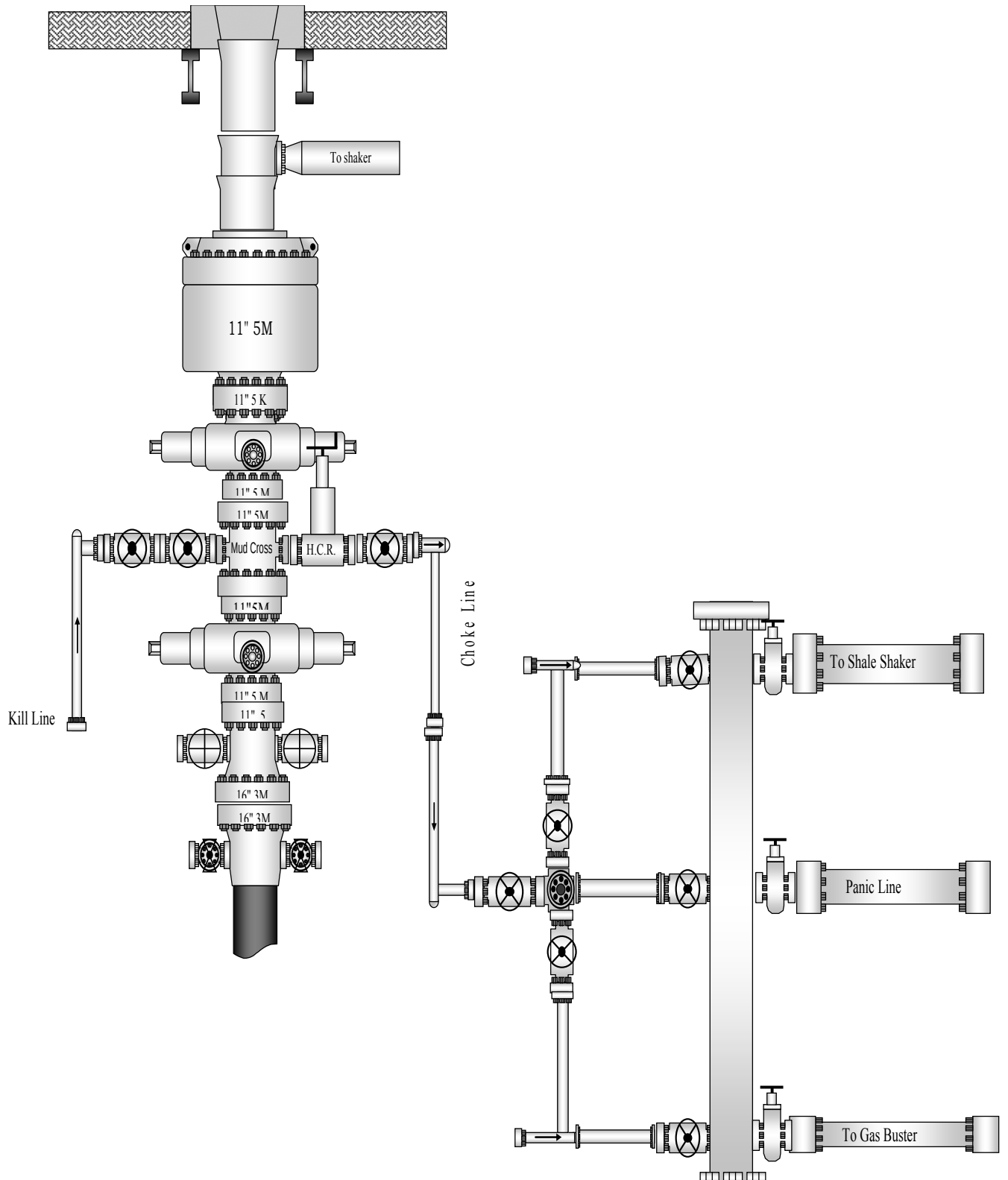
Hole	Size/	Bottom to Top	Low - High Test Pressures
<u>Size</u>	<u>Pressure</u>	<u>Arrangement</u>	<u>Rams / Annular</u>
20"	21 3/4" 2M	A	N.A.
14 3/4"	21 3/4" 2M	A	N.A.
9-7/8"	11" 5M	P/S/B/A	250 - 3,500 / 250 - 2,000
4-3/4"	11" 5M	P/S/B/A	250 - 3,500 / 250 - 2,000

P = Pipe Ram B= Blind Ram A= Annular S=Drilling Spool

The Company Man, Tool Pusher, and Driller will have current Well Control Certificates. Well Control will use the IADC accepted methods. This area is more Famous for Lost Circulation than for Kicks. Pictures of BOP's in Attachments.







ATTACHMENT 13

Directional Drilling Program



Breitburn Florida LLC

Raccoon Point Field

PAD 4

27-3AHL

90212017900

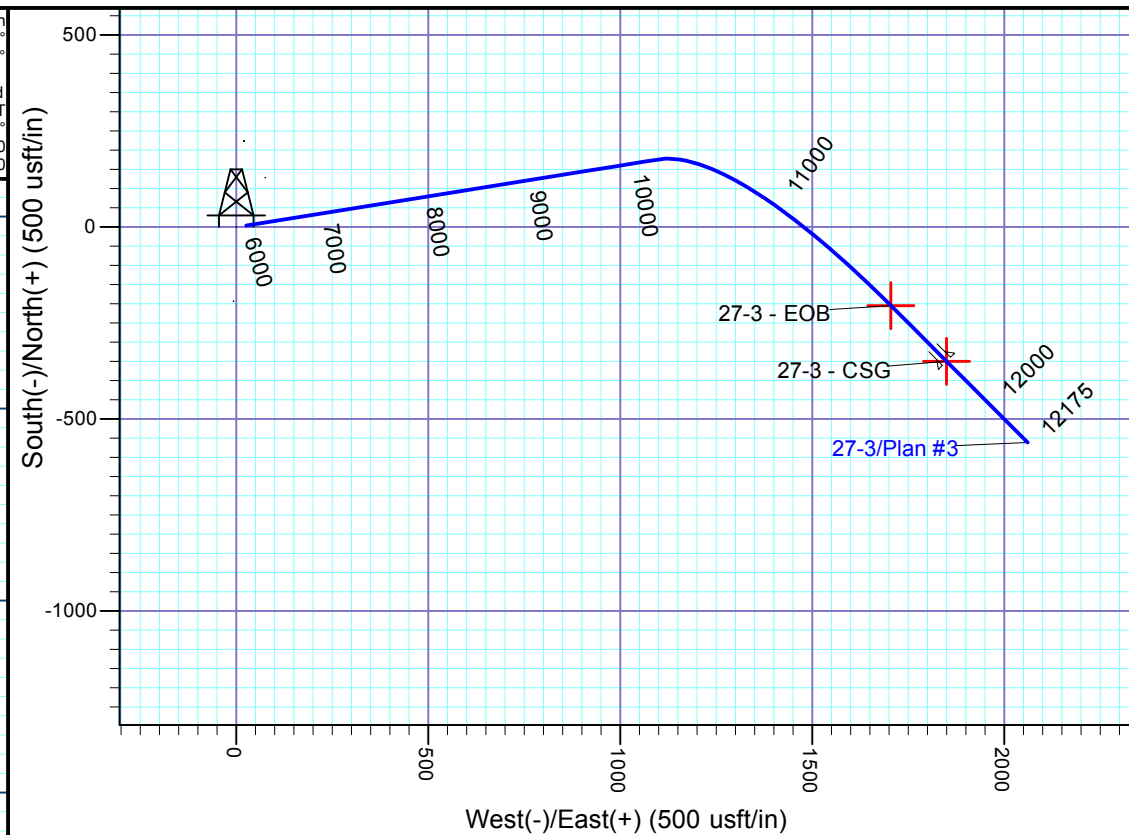
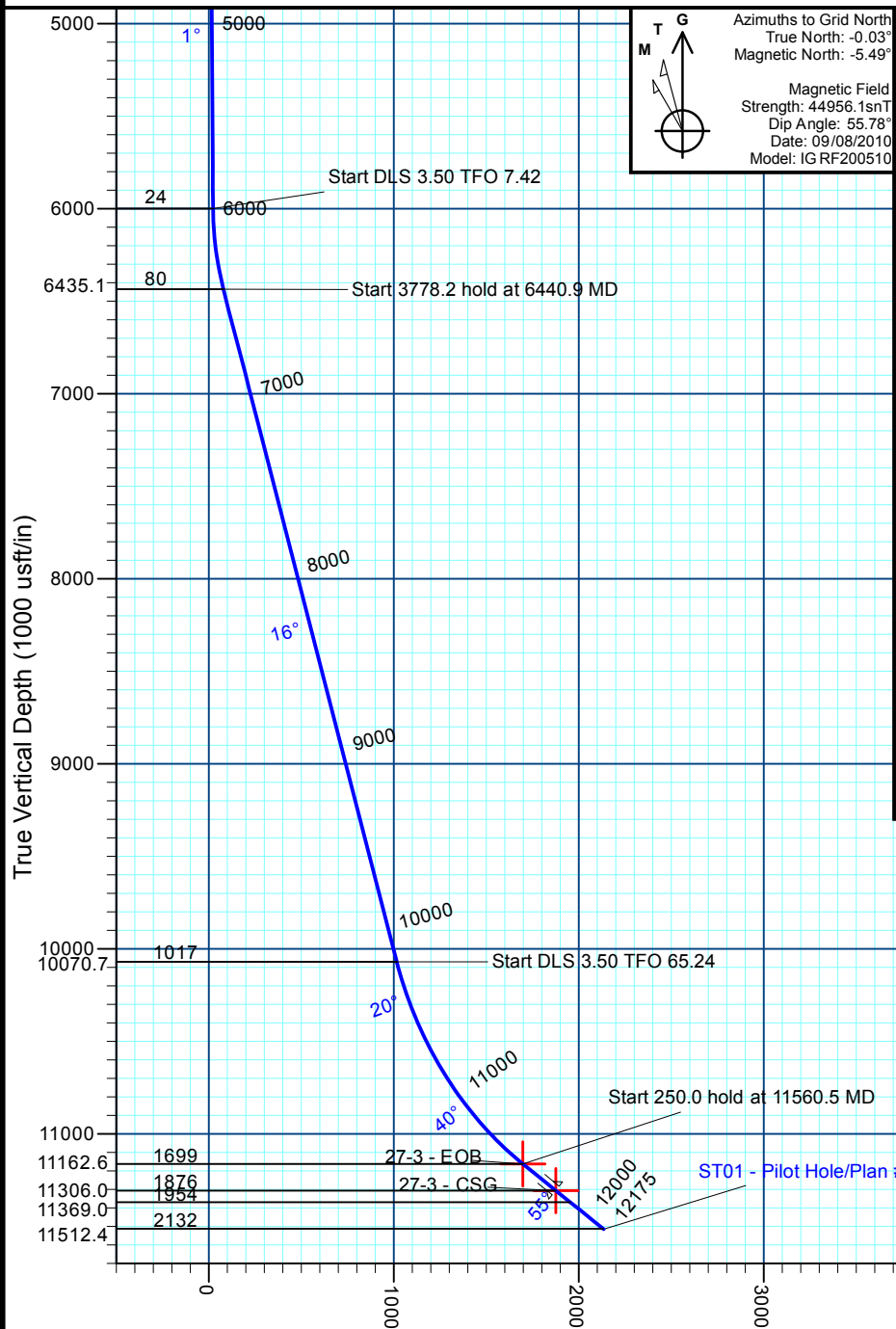
ST01 - Pilot Hole

Plan: Plan #3

Standard Planning Report

12 November, 2010





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	6000.0	0.36	73.64	5999.9	3.8	25.7	0.00	0.00	23.8	
2	6440.9	15.79	80.89	6435.1	13.8	86.6	3.50	7.42	80.0	
3	10219.1	15.79	80.89	10070.7	176.5	1101.9	0.00	0.00	1016.9	
4	11560.5	55.00	135.00	11162.6	-204.7	1704.7	3.50	65.24	1698.7	27-3 - EOB
5	11810.5	55.00	135.00	11306.0	-349.5	1849.5	0.00	0.00	1876.4	27-3 - CSG
6	12174.9	55.00	135.00	11515.0	-560.6	2060.6	0.00	0.00	2135.4	

Vertical Section at 105.22° (1000 usft/in)

Database:	EDM-BoHolland	Local Co-ordinate Reference	Well 27-3A
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01 - Pilot Hole		
Design:	Plan #3		

Project	Raccoon Point Field, Collier County, Florida, Permit 1331		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Florida East 901		Using geodetic scale factor

Site	PAD 4		
Site Position:		Northing:	606,074.72 usft
From:	Map	Easting:	524,926.31 usft
Position Uncertainty:	0.0 usft	Slot Radius:	0 "
		Latitude:	26° 0' 3.996 N
		Longitude:	80° 55' 26.796 W
		Grid Convergence:	0.03 °

Well	27-3		
Well Position	+N/-S	-793.6 usft	Northing: 605,281.16 usft
	+E/-W	-189.2 usft	Easting: 524,737.13 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	10.0 usft
		Latitude:	25° 59' 56.137 N
		Longitude:	80° 55' 28.874 W
		Ground Level:	10.0 usft

Wellbore	ST01 - Pilot Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	09/08/10	-5.45	55.78	44,956

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	6,000.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	105.17

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
6,000.0	0.36	73.64	5,999.9	3.8	25.7	0.00	0.00	0.00	0.00	
6,440.9	15.79	80.89	6,435.1	13.8	86.6	3.50	3.50	1.65	7.42	
10,219.1	15.79	80.89	10,070.7	176.5	1,101.9	0.00	0.00	0.00	0.00	
11,560.5	55.00	135.00	11,162.6	-204.7	1,704.7	3.50	2.92	4.03	65.24	27-3 - EOB
11,810.5	55.00	135.00	11,306.0	-349.5	1,849.5	0.00	0.00	0.00	0.00	27-3 - CSG
11,920.4	55.00	135.00	11,369.0	-413.1	1,913.1	0.00	0.00	0.00	0.00	27-3 - Heel
12,170.4	55.00	135.00	11,512.4	-557.9	2,057.9	0.00	0.00	0.00	0.00	

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01 - Pilot Hole		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.25	345.97	100.0	0.2	-0.1	-0.1	0.25	0.25	0.00
200.0	0.25	303.97	200.0	0.5	-0.3	-0.4	0.18	0.00	-42.00
250.0	0.13	303.97	250.0	0.6	-0.4	-0.6	0.25	-0.25	0.00
20" CSG									
300.0	0.00	359.97	300.0	0.7	-0.5	-0.6	0.25	-0.25	0.00
400.0	0.25	329.97	400.0	0.9	-0.6	-0.8	0.25	0.25	0.00
500.0	0.00	359.97	500.0	1.0	-0.7	-0.9	0.25	-0.25	0.00
600.0	0.25	201.97	600.0	0.8	-0.8	-1.0	0.25	0.25	0.00
700.0	0.25	109.97	700.0	0.6	-0.6	-0.8	0.36	0.00	-92.00
800.0	0.25	109.97	800.0	0.4	-0.2	-0.3	0.00	0.00	0.00
900.0	0.25	156.97	900.0	0.1	0.1	0.0	0.20	0.00	47.00
1,000.0	0.25	107.97	1,000.0	-0.1	0.3	0.4	0.21	0.00	-49.00
1,100.0	0.25	118.97	1,100.0	-0.3	0.7	0.8	0.05	0.00	11.00
1,200.0	0.25	112.97	1,200.0	-0.5	1.1	1.2	0.03	0.00	-6.00
1,300.0	0.50	88.97	1,300.0	-0.6	1.8	1.9	0.29	0.25	-24.00
1,400.0	0.00	359.97	1,400.0	-0.6	2.2	2.3	0.50	-0.50	0.00
1,500.0	0.25	33.97	1,500.0	-0.4	2.3	2.4	0.25	0.25	0.00
1,600.0	0.25	76.97	1,600.0	-0.1	2.7	2.6	0.18	0.00	43.00
1,700.0	0.50	24.97	1,700.0	0.3	3.1	2.9	0.40	0.25	-52.00
1,800.0	0.50	23.97	1,800.0	1.1	3.4	3.0	0.01	0.00	-1.00
1,900.0	0.75	17.97	1,900.0	2.1	3.8	3.1	0.26	0.25	-6.00
2,000.0	0.50	26.97	2,000.0	3.1	4.2	3.2	0.27	-0.25	9.00
2,100.0	0.50	24.97	2,100.0	3.9	4.6	3.4	0.02	0.00	-2.00
2,180.0	0.30	36.99	2,180.0	4.4	4.9	3.5	0.27	-0.25	15.03
13 3/8"									
2,200.0	0.25	42.97	2,200.0	4.5	4.9	3.6	0.27	-0.23	29.89
2,300.0	0.50	8.97	2,300.0	5.1	5.1	3.6	0.32	0.25	-34.00
2,400.0	0.25	41.97	2,400.0	5.6	5.4	3.7	0.32	-0.25	33.00
2,500.0	0.50	28.97	2,500.0	6.2	5.7	3.9	0.26	0.25	-13.00
2,600.0	0.25	46.97	2,600.0	6.7	6.1	4.1	0.27	-0.25	18.00
2,700.0	0.23	37.97	2,700.0	7.0	6.4	4.3	0.04	-0.02	-9.00
2,800.0	0.50	116.97	2,800.0	7.0	6.9	4.8	0.51	0.27	79.00
2,900.0	0.50	42.97	2,899.9	7.1	7.6	5.4	0.60	0.00	-74.00
3,000.0	0.50	84.97	2,999.9	7.5	8.3	6.1	0.36	0.00	42.00
3,100.0	0.50	54.97	3,099.9	7.8	9.1	6.7	0.26	0.00	-30.00
3,200.0	0.50	117.97	3,199.9	7.8	9.8	7.4	0.52	0.00	63.00
3,300.0	0.50	121.97	3,299.9	7.4	10.6	8.3	0.03	0.00	4.00
3,400.0	0.50	137.97	3,399.9	6.8	11.2	9.1	0.14	0.00	16.00
3,500.0	0.50	113.97	3,499.9	6.3	11.9	9.9	0.21	0.00	-24.00
3,600.0	0.50	146.97	3,599.9	5.8	12.6	10.6	0.28	0.00	33.00
3,700.0	0.25	153.97	3,699.9	5.2	12.9	11.1	0.25	-0.25	7.00
3,800.0	0.50	121.97	3,799.9	4.8	13.4	11.7	0.32	0.25	-32.00
3,900.0	0.25	153.97	3,899.9	4.4	13.8	12.2	0.32	-0.25	32.00
3,990.0	0.19	141.61	3,989.9	4.1	14.0	12.5	0.09	-0.07	-13.73
9 5/8"									
4,397.0	0.25	36.97	4,396.9	4.2	15.0	13.3	0.09	0.02	-25.71
4,836.0	0.50	98.97	4,835.9	4.7	17.4	15.6	0.10	0.06	14.12
5,301.0	0.50	98.97	5,300.9	4.1	21.4	19.6	0.00	0.00	0.00
5,765.0	0.25	95.97	5,764.9	3.7	24.4	22.6	0.05	-0.05	-0.65
6,000.0	0.36	73.64	5,999.9	3.8	25.7	23.8	0.07	0.05	-9.50
Start DLS 3.50 TFO 7.42									

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01 - Pilot Hole		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,100.0	3.86	80.37	6,099.8	4.5	29.3	27.1	3.50	3.50	6.73
6,200.0	7.36	80.70	6,199.3	6.1	38.9	36.0	3.50	3.50	0.33
6,300.0	10.86	80.82	6,298.0	8.6	54.6	50.4	3.50	3.50	0.12
6,400.0	14.36	80.88	6,395.6	12.1	76.1	70.3	3.50	3.50	0.06
6,440.9	15.79	80.89	6,435.1	13.8	86.6	80.0	3.50	3.50	0.04
Start 3778.2 hold at 6440.9 MD									
6,500.0	15.79	80.89	6,492.0	16.3	102.5	94.7	0.00	0.00	0.00
6,600.0	15.79	80.89	6,588.2	20.6	129.4	119.5	0.00	0.00	0.00
6,700.0	15.79	80.89	6,684.4	24.9	156.2	144.3	0.00	0.00	0.00
6,800.0	15.79	80.89	6,780.6	29.2	183.1	169.1	0.00	0.00	0.00
6,900.0	15.79	80.89	6,876.9	33.5	210.0	193.9	0.00	0.00	0.00
7,000.0	15.79	80.89	6,973.1	37.8	236.9	218.7	0.00	0.00	0.00
7,100.0	15.79	80.89	7,069.3	42.1	263.7	243.5	0.00	0.00	0.00
7,200.0	15.79	80.89	7,165.5	46.5	290.6	268.3	0.00	0.00	0.00
7,300.0	15.79	80.89	7,261.8	50.8	317.5	293.1	0.00	0.00	0.00
7,400.0	15.79	80.89	7,358.0	55.1	344.3	317.9	0.00	0.00	0.00
7,500.0	15.79	80.89	7,454.2	59.4	371.2	342.7	0.00	0.00	0.00
7,600.0	15.79	80.89	7,550.4	63.7	398.1	367.5	0.00	0.00	0.00
7,700.0	15.79	80.89	7,646.7	68.0	425.0	392.4	0.00	0.00	0.00
7,800.0	15.79	80.89	7,742.9	72.3	451.8	417.2	0.00	0.00	0.00
7,900.0	15.79	80.89	7,839.1	76.6	478.7	442.0	0.00	0.00	0.00
8,000.0	15.79	80.89	7,935.3	80.9	505.6	466.8	0.00	0.00	0.00
8,100.0	15.79	80.89	8,031.6	85.2	532.4	491.6	0.00	0.00	0.00
8,200.0	15.79	80.89	8,127.8	89.5	559.3	516.4	0.00	0.00	0.00
8,300.0	15.79	80.89	8,224.0	93.8	586.2	541.2	0.00	0.00	0.00
8,400.0	15.79	80.89	8,320.2	98.1	613.0	566.0	0.00	0.00	0.00
8,500.0	15.79	80.89	8,416.5	102.4	639.9	590.8	0.00	0.00	0.00
8,600.0	15.79	80.89	8,512.7	106.7	666.8	615.6	0.00	0.00	0.00
8,700.0	15.79	80.89	8,608.9	111.1	693.7	640.4	0.00	0.00	0.00
8,800.0	15.79	80.89	8,705.1	115.4	720.5	665.2	0.00	0.00	0.00
8,900.0	15.79	80.89	8,801.4	119.7	747.4	690.0	0.00	0.00	0.00
9,000.0	15.79	80.89	8,897.6	124.0	774.3	714.9	0.00	0.00	0.00
9,100.0	15.79	80.89	8,993.8	128.3	801.1	739.7	0.00	0.00	0.00
9,200.0	15.79	80.89	9,090.1	132.6	828.0	764.5	0.00	0.00	0.00
9,300.0	15.79	80.89	9,186.3	136.9	854.9	789.3	0.00	0.00	0.00
9,400.0	15.79	80.89	9,282.5	141.2	881.8	814.1	0.00	0.00	0.00
9,500.0	15.79	80.89	9,378.7	145.5	908.6	838.9	0.00	0.00	0.00
9,600.0	15.79	80.89	9,475.0	149.8	935.5	863.7	0.00	0.00	0.00
9,700.0	15.79	80.89	9,571.2	154.1	962.4	888.5	0.00	0.00	0.00
9,800.0	15.79	80.89	9,667.4	158.4	989.2	913.3	0.00	0.00	0.00
9,900.0	15.79	80.89	9,763.6	162.7	1,016.1	938.1	0.00	0.00	0.00
10,000.0	15.79	80.89	9,859.9	167.0	1,043.0	962.9	0.00	0.00	0.00
10,100.0	15.79	80.89	9,956.1	171.4	1,069.9	987.7	0.00	0.00	0.00
10,200.0	15.79	80.89	10,052.3	175.7	1,096.7	1,012.5	0.00	0.00	0.00
10,219.1	15.79	80.89	10,070.7	176.5	1,101.9	1,017.3	0.00	0.00	0.00
Start DLS 3.50 TFO 65.24									
10,300.0	17.17	89.64	10,148.3	178.3	1,124.7	1,038.8	3.50	1.70	10.81
10,400.0	19.30	98.53	10,243.3	175.9	1,155.8	1,069.5	3.50	2.13	8.90
10,500.0	21.77	105.60	10,336.9	168.5	1,190.0	1,104.4	3.50	2.48	7.07
10,600.0	24.49	111.24	10,428.9	156.0	1,227.2	1,143.6	3.50	2.72	5.63
10,700.0	27.37	115.78	10,518.8	138.5	1,267.2	1,186.8	3.50	2.88	4.54
10,800.0	30.38	119.50	10,606.4	116.0	1,309.9	1,233.9	3.50	3.01	3.72

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01 - Pilot Hole		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,900.0	33.47	122.60	10,691.3	88.7	1,355.2	1,284.8	3.50	3.09	3.10
11,000.0	36.63	125.23	10,773.1	56.7	1,402.8	1,339.1	3.50	3.16	2.63
11,100.0	39.84	127.49	10,851.7	19.9	1,452.6	1,396.8	3.50	3.21	2.26
11,200.0	43.08	129.46	10,926.6	-21.3	1,504.4	1,457.6	3.50	3.25	1.98
11,300.0	46.36	131.21	10,997.6	-66.8	1,558.0	1,521.2	3.50	3.28	1.75
11,400.0	49.66	132.78	11,064.5	-116.6	1,613.2	1,587.5	3.50	3.30	1.57
11,500.0	52.98	134.20	11,127.0	-170.3	1,669.8	1,656.2	3.50	3.32	1.42
11,560.5	55.00	135.00	11,162.6	-204.7	1,704.7	1,698.9	3.50	3.33	1.32
Start 250.0 hold at 11560.5 MD - 27-3 - EOB									
11,600.0	55.00	135.00	11,185.2	-227.6	1,727.6	1,726.9	0.00	0.00	0.00
11,700.0	55.00	135.00	11,242.6	-285.5	1,785.5	1,798.0	0.00	0.00	0.00
11,733.8	55.00	135.00	11,262.0	-305.1	1,805.1	1,822.0	0.00	0.00	0.00
TRN_C_FLOW_ZN_TOP									
11,754.7	55.00	135.00	11,274.0	-317.2	1,817.2	1,836.9	0.00	0.00	0.00
TRN_C_FLOW_ZN_BS									
11,800.0	55.00	135.00	11,300.0	-343.4	1,843.4	1,869.0	0.00	0.00	0.00
11,805.3	55.00	135.00	11,303.0	-346.5	1,846.5	1,872.8	0.00	0.00	0.00
TRN_C_BASE									
11,810.5	55.00	135.00	11,306.0	-349.5	1,849.5	1,876.5	0.00	0.00	0.00
Start 109.8 hold at 11810.5 MD - Lake Trafford - 7" - 27-3 - CSG									
11,871.6	55.00	135.00	11,341.0	-384.8	1,884.8	1,919.9	0.00	0.00	0.00
Sunniland									
11,878.5	55.00	135.00	11,345.0	-388.9	1,888.9	1,924.8	0.00	0.00	0.00
Sunniland A									
11,897.7	55.00	135.00	11,356.0	-400.0	1,900.0	1,938.5	0.00	0.00	0.00
Sunniland B									
11,900.0	55.00	135.00	11,357.3	-401.3	1,901.3	1,940.1	0.00	0.00	0.00
11,920.4	55.00	135.00	11,369.0	-413.1	1,913.1	1,954.6	0.00	0.00	0.00
Start 250.0 hold at 11920.4 MD - Sunniland C									
12,000.0	55.00	135.00	11,414.7	-459.2	1,959.2	2,011.1	0.00	0.00	0.00
12,021.0	55.00	135.00	11,426.7	-471.4	1,971.4	2,026.1	0.00	0.00	0.00
27-3 - Heel									
12,100.0	55.00	135.00	11,472.0	-517.2	2,017.2	2,082.2	0.00	0.00	0.00
12,170.4	55.00	135.00	11,512.4	-557.9	2,057.9	2,132.2	0.00	0.00	0.00
TD at 12170.4									

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01 - Pilot Hole		
Design:	Plan #3		

Design Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
27-3 - EOB - plan hits target center - Point	0.00	0.00	11,162.6	-204.7	1,704.7	605,076.48	526,441.73	25° 59' 54.099 N	80° 55' 10.193 W
27-3 - CSG - plan hits target center - Point	0.00	0.00	11,306.0	-349.5	1,849.5	604,931.68	526,586.52	25° 59' 52.664 N	80° 55' 8.607 W
27-3 - Heel - plan misses target center by 70.5usft at 12021.0usft MD (11426.7 TVD, -471.4 N, 1971.4 E) - Point	0.00	0.00	11,369.0	-500.0	2,000.0	604,781.19	526,737.02	25° 59' 51.172 N	80° 55' 6.959 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
250.0	250.0	20" CSG	20	22
2,180.0	2,180.0	13 3/8"	13-3/8	17-1/2
3,990.0	3,989.9	9 5/8"	9-5/8	12-1/4
11,810.5	11,306.0	7"	7	9-7/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
11,733.8	11,262.0	TRN_C_FLOW_ZN_TOP		0.00	
11,754.7	11,274.0	TRN_C_FLOW_ZN_BS		0.00	
11,805.3	11,303.0	TRN_C_BASE		0.00	
11,810.5	11,306.0	Lake Trafford		0.00	
11,871.6	11,341.0	Sunniland		0.00	
11,878.5	11,345.0	Sunniland A		0.00	
11,897.7	11,356.0	Sunniland B		0.00	
11,920.4	11,369.0	Sunniland C		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,000.0	5,999.9	3.8	25.7	Start DLS 3.50 TFO 7.42
6,440.9	6,435.1	13.8	86.6	Start 3778.2 hold at 6440.9 MD
10,219.1	10,070.7	176.5	1,101.9	Start DLS 3.50 TFO 65.24
11,560.5	11,162.6	-204.7	1,704.7	Start 250.0 hold at 11560.5 MD
11,810.5	11,306.0	-349.5	1,849.5	Start 109.8 hold at 11810.5 MD
11,920.4	11,369.0	-413.1	1,913.1	Start 250.0 hold at 11920.4 MD
12,170.4	11,512.4	-557.9	2,057.9	TD at 12170.4



Breitburn Florida LLC

Raccoon Point Field

PAD 4

27-3AHL

90212017900

ST02 - Horizontal

Plan: Plan #3

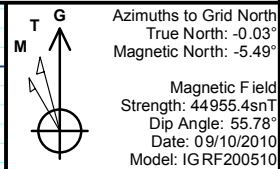
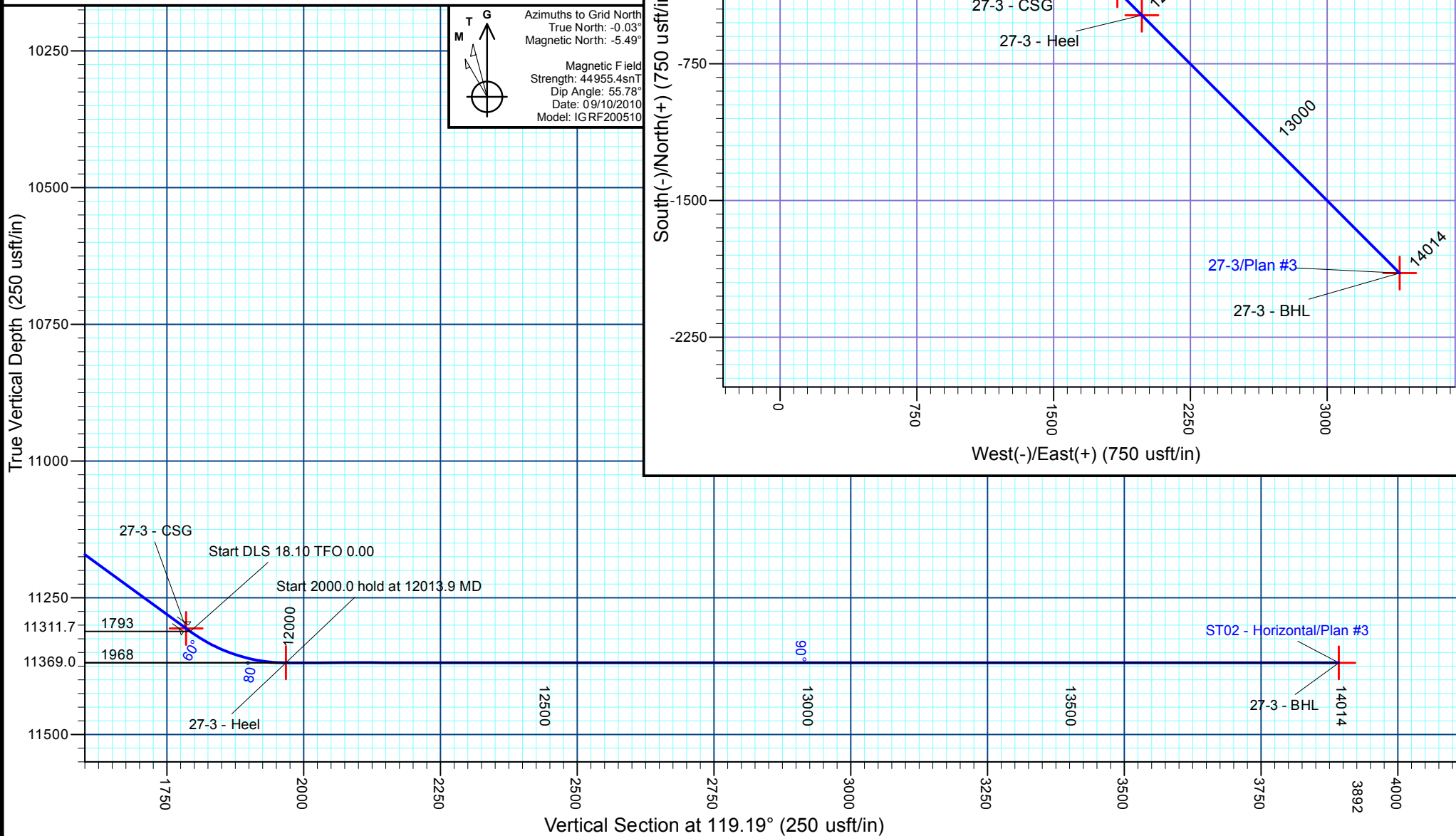
Standard Planning Report

12 November, 2010



SECTION DE TAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	11820.5	55.00	135.00	11311.7	-355.3	1855.3	0.00	0.00	1793.0	
2	12013.9	90.00	135.00	11369.0	-483.7	1983.7	18.10	0.00	1967.7	
3	14013.9	90.00	135.00	11369.0	-1897.9	3397.9	0.00	0.00	3892.0	27-3 - BHL



Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST02 - Horizontal		
Design:	Plan #3		

Project	Raccoon Point Field, Collier County, Florida, Permit 1331		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Florida East 901		Using geodetic scale factor

Site	PAD 4		
Site Position:		Northing:	606,074.72 usft
From:	Map	Easting:	524,926.31 usft
Position Uncertainty:	0.0 usft	Slot Radius:	0 "
		Latitude:	26° 0' 3.996 N
		Longitude:	80° 55' 26.796 W
		Grid Convergence:	0.03 °

Well	27-3		
Well Position	+N/-S	-793.6 usft	Northing: 605,281.16 usft
	+E/-W	-189.2 usft	Easting: 524,737.13 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	10.0 usft
		Latitude:	25° 59' 56.137 N
		Longitude:	80° 55' 28.874 W
		Ground Level:	10.0 usft

Wellbore	ST02 - Horizontal				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	09/10/10	-5.45	55.78	44,955

Design	Plan #3				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	11,820.5	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	119.19	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
11,820.5	55.00	135.00	11,311.7	-355.3	1,855.3	0.00	0.00	0.00	0.00	
12,013.9	90.00	135.00	11,369.0	-483.7	1,983.7	18.10	18.10	0.00	0.00	
14,013.9	90.00	135.00	11,369.0	-1,897.9	3,397.9	0.00	0.00	0.00	0.00	27-3 - BHL

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST02 - Horizontal		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.25	345.97	100.0	0.2	-0.1	-0.1	0.25	0.25	0.00
200.0	0.25	303.97	200.0	0.5	-0.3	-0.5	0.18	0.00	-42.00
250.0	0.13	303.97	250.0	0.6	-0.4	-0.7	0.25	-0.25	0.00
20" CSG									
300.0	0.00	359.97	300.0	0.7	-0.5	-0.7	0.25	-0.25	0.00
400.0	0.25	329.97	400.0	0.9	-0.6	-0.9	0.25	0.25	0.00
500.0	0.00	359.97	500.0	1.0	-0.7	-1.1	0.25	-0.25	0.00
600.0	0.25	201.97	600.0	0.8	-0.8	-1.1	0.25	0.25	0.00
700.0	0.25	109.97	700.0	0.6	-0.6	-0.8	0.36	0.00	-92.00
800.0	0.25	109.97	800.0	0.4	-0.2	-0.4	0.00	0.00	0.00
900.0	0.25	156.97	900.0	0.1	0.1	0.0	0.20	0.00	47.00
1,000.0	0.25	107.97	1,000.0	-0.1	0.3	0.4	0.21	0.00	-49.00
1,100.0	0.25	118.97	1,100.0	-0.3	0.7	0.8	0.05	0.00	11.00
1,200.0	0.25	112.97	1,200.0	-0.5	1.1	1.2	0.03	0.00	-6.00
1,300.0	0.50	88.97	1,300.0	-0.6	1.8	1.8	0.29	0.25	-24.00
1,400.0	0.00	359.97	1,400.0	-0.6	2.2	2.2	0.50	-0.50	0.00
1,500.0	0.25	33.97	1,500.0	-0.4	2.3	2.2	0.25	0.25	0.00
1,600.0	0.25	76.97	1,600.0	-0.1	2.7	2.4	0.18	0.00	43.00
1,700.0	0.50	24.97	1,700.0	0.3	3.1	2.5	0.40	0.25	-52.00
1,800.0	0.50	23.97	1,800.0	1.1	3.4	2.5	0.01	0.00	-1.00
1,900.0	0.75	17.97	1,900.0	2.1	3.8	2.3	0.26	0.25	-6.00
2,000.0	0.50	26.97	2,000.0	3.1	4.2	2.1	0.27	-0.25	9.00
2,100.0	0.50	24.97	2,100.0	3.9	4.6	2.1	0.02	0.00	-2.00
2,180.0	0.30	36.99	2,180.0	4.4	4.9	2.1	0.27	-0.25	15.03
13 3/8"									
2,200.0	0.25	42.97	2,200.0	4.5	4.9	2.1	0.27	-0.23	29.89
2,300.0	0.50	8.97	2,300.0	5.1	5.1	2.0	0.32	0.25	-34.00
2,400.0	0.25	41.97	2,400.0	5.6	5.4	1.9	0.32	-0.25	33.00
2,500.0	0.50	28.97	2,500.0	6.2	5.7	2.0	0.26	0.25	-13.00
2,600.0	0.25	46.97	2,600.0	6.7	6.1	2.0	0.27	-0.25	18.00
2,700.0	0.23	37.97	2,700.0	7.0	6.4	2.1	0.04	-0.02	-9.00
2,800.0	0.50	116.97	2,800.0	7.0	6.9	2.6	0.51	0.27	79.00
2,900.0	0.50	42.97	2,899.9	7.1	7.6	3.1	0.60	0.00	-74.00
3,000.0	0.50	84.97	2,999.9	7.5	8.3	3.6	0.36	0.00	42.00
3,100.0	0.50	54.97	3,099.9	7.8	9.1	4.1	0.26	0.00	-30.00
3,200.0	0.50	117.97	3,199.9	7.8	9.8	4.8	0.52	0.00	63.00
3,300.0	0.50	121.97	3,299.9	7.4	10.6	5.6	0.03	0.00	4.00
3,400.0	0.50	137.97	3,399.9	6.8	11.2	6.5	0.14	0.00	16.00
3,500.0	0.50	113.97	3,499.9	6.3	11.9	7.3	0.21	0.00	-24.00
3,600.0	0.50	146.97	3,599.9	5.8	12.6	8.2	0.28	0.00	33.00
3,700.0	0.25	153.97	3,699.9	5.2	12.9	8.7	0.25	-0.25	7.00
3,800.0	0.50	121.97	3,799.9	4.8	13.4	9.3	0.32	0.25	-32.00
3,900.0	0.25	153.97	3,899.9	4.4	13.8	10.0	0.32	-0.25	32.00
3,990.0	0.19	141.61	3,989.9	4.1	14.0	10.3	0.09	-0.07	-13.73
9 5/8"									
4,397.0	0.25	36.97	4,396.9	4.2	15.0	11.0	0.09	0.02	-25.71
4,836.0	0.50	98.97	4,835.9	4.7	17.4	12.9	0.10	0.06	14.12
5,301.0	0.50	98.97	5,300.9	4.1	21.4	16.7	0.00	0.00	0.00
5,765.0	0.25	95.97	5,764.9	3.7	24.4	19.6	0.05	-0.05	-0.65
6,000.0	0.36	73.64	5,999.9	3.8	25.7	20.6	0.07	0.05	-9.50
6,100.0	3.86	80.37	6,099.8	4.5	29.3	23.4	3.50	3.50	6.73

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST02 - Horizontal		
Design:	Plan #3		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
6,200.0	7.36	80.70	6,199.3	6.1	38.9	31.0	3.50	3.50	0.33	
6,300.0	10.86	80.82	6,298.0	8.6	54.6	43.4	3.50	3.50	0.12	
6,400.0	14.36	80.88	6,395.6	12.1	76.1	60.6	3.50	3.50	0.06	
6,440.9	15.79	80.89	6,435.1	13.8	86.6	68.9	3.50	3.50	0.04	
6,500.0	15.79	80.89	6,492.0	16.3	102.5	81.5	0.00	0.00	0.00	
6,600.0	15.79	80.89	6,588.2	20.6	129.4	102.9	0.00	0.00	0.00	
6,700.0	15.79	80.89	6,684.4	24.9	156.2	124.3	0.00	0.00	0.00	
6,800.0	15.79	80.89	6,780.6	29.2	183.1	145.6	0.00	0.00	0.00	
6,900.0	15.79	80.89	6,876.9	33.5	210.0	167.0	0.00	0.00	0.00	
7,000.0	15.79	80.89	6,973.1	37.8	236.9	188.3	0.00	0.00	0.00	
7,100.0	15.79	80.89	7,069.3	42.1	263.7	209.7	0.00	0.00	0.00	
7,200.0	15.79	80.89	7,165.5	46.5	290.6	231.1	0.00	0.00	0.00	
7,300.0	15.79	80.89	7,261.8	50.8	317.5	252.4	0.00	0.00	0.00	
7,400.0	15.79	80.89	7,358.0	55.1	344.3	273.8	0.00	0.00	0.00	
7,500.0	15.79	80.89	7,454.2	59.4	371.2	295.1	0.00	0.00	0.00	
7,600.0	15.79	80.89	7,550.4	63.7	398.1	316.5	0.00	0.00	0.00	
7,700.0	15.79	80.89	7,646.7	68.0	425.0	337.8	0.00	0.00	0.00	
7,800.0	15.79	80.89	7,742.9	72.3	451.8	359.2	0.00	0.00	0.00	
7,900.0	15.79	80.89	7,839.1	76.6	478.7	380.6	0.00	0.00	0.00	
8,000.0	15.79	80.89	7,935.3	80.9	505.6	401.9	0.00	0.00	0.00	
8,100.0	15.79	80.89	8,031.6	85.2	532.4	423.3	0.00	0.00	0.00	
8,200.0	15.79	80.89	8,127.8	89.5	559.3	444.6	0.00	0.00	0.00	
8,300.0	15.79	80.89	8,224.0	93.8	586.2	466.0	0.00	0.00	0.00	
8,400.0	15.79	80.89	8,320.2	98.1	613.0	487.4	0.00	0.00	0.00	
8,500.0	15.79	80.89	8,416.5	102.4	639.9	508.7	0.00	0.00	0.00	
8,600.0	15.79	80.89	8,512.7	106.7	666.8	530.1	0.00	0.00	0.00	
8,700.0	15.79	80.89	8,608.9	111.1	693.7	551.4	0.00	0.00	0.00	
8,800.0	15.79	80.89	8,705.1	115.4	720.5	572.8	0.00	0.00	0.00	
8,900.0	15.79	80.89	8,801.4	119.7	747.4	594.2	0.00	0.00	0.00	
9,000.0	15.79	80.89	8,897.6	124.0	774.3	615.5	0.00	0.00	0.00	
9,100.0	15.79	80.89	8,993.8	128.3	801.1	636.9	0.00	0.00	0.00	
9,200.0	15.79	80.89	9,090.1	132.6	828.0	658.2	0.00	0.00	0.00	
9,300.0	15.79	80.89	9,186.3	136.9	854.9	679.6	0.00	0.00	0.00	
9,400.0	15.79	80.89	9,282.5	141.2	881.8	701.0	0.00	0.00	0.00	
9,500.0	15.79	80.89	9,378.7	145.5	908.6	722.3	0.00	0.00	0.00	
9,600.0	15.79	80.89	9,475.0	149.8	935.5	743.7	0.00	0.00	0.00	
9,700.0	15.79	80.89	9,571.2	154.1	962.4	765.0	0.00	0.00	0.00	
9,800.0	15.79	80.89	9,667.4	158.4	989.2	786.4	0.00	0.00	0.00	
9,900.0	15.79	80.89	9,763.6	162.7	1,016.1	807.8	0.00	0.00	0.00	
10,000.0	15.79	80.89	9,859.9	167.0	1,043.0	829.1	0.00	0.00	0.00	
10,100.0	15.79	80.89	9,956.1	171.4	1,069.9	850.5	0.00	0.00	0.00	
10,200.0	15.79	80.89	10,052.3	175.7	1,096.7	871.8	0.00	0.00	0.00	
10,219.1	15.79	80.89	10,070.7	176.5	1,101.9	875.9	0.00	0.00	0.00	
10,300.0	17.17	89.64	10,148.3	178.3	1,124.7	894.9	3.50	1.70	10.81	
10,400.0	19.30	98.53	10,243.3	175.9	1,155.8	923.2	3.50	2.13	8.90	
10,500.0	21.77	105.60	10,336.9	168.5	1,190.0	956.7	3.50	2.48	7.07	
10,600.0	24.49	111.24	10,428.9	156.0	1,227.2	995.3	3.50	2.72	5.63	
10,700.0	27.37	115.78	10,518.8	138.5	1,267.2	1,038.8	3.50	2.88	4.54	
10,800.0	30.38	119.50	10,606.4	116.0	1,309.9	1,087.0	3.50	3.01	3.72	
10,900.0	33.47	122.60	10,691.3	88.7	1,355.2	1,139.9	3.50	3.09	3.10	
11,000.0	36.63	125.23	10,773.1	56.7	1,402.8	1,197.1	3.50	3.16	2.63	
11,100.0	39.84	127.49	10,851.7	19.9	1,452.6	1,258.5	3.50	3.21	2.26	

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST02 - Horizontal		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,200.0	43.08	129.46	10,926.6	-21.3	1,504.4	1,323.8	3.50	3.25	1.98
11,300.0	46.36	131.21	10,997.6	-66.8	1,558.0	1,392.8	3.50	3.28	1.75
11,400.0	49.66	132.78	11,064.5	-116.6	1,613.2	1,465.3	3.50	3.30	1.57
11,500.0	52.98	134.20	11,127.0	-170.3	1,669.8	1,540.9	3.50	3.32	1.42
11,560.5	55.00	135.00	11,162.6	-204.7	1,704.7	1,588.1	3.50	3.33	1.32
11,600.0	55.00	135.00	11,185.2	-227.6	1,727.6	1,619.2	0.00	0.00	0.00
11,700.0	55.00	135.00	11,242.6	-285.5	1,785.5	1,698.0	0.00	0.00	0.00
11,733.8	55.00	135.00	11,262.0	-305.1	1,805.1	1,724.7	0.00	0.00	0.00
TRN_C_FLOW_ZN_TOP									
11,754.7	55.00	135.00	11,274.0	-317.2	1,817.2	1,741.2	0.00	0.00	0.00
TRN_C_FLOW_ZN_BS									
11,800.0	55.00	135.00	11,300.0	-343.4	1,843.4	1,776.8	0.00	0.00	0.00
11,805.3	55.00	135.00	11,303.0	-346.5	1,846.5	1,781.0	0.00	0.00	0.00
TRN_C_BASE									
11,810.5	55.00	135.00	11,306.0	-349.5	1,849.5	1,785.1	0.00	0.00	0.00
Lake Trafford - 7" - 27-3 - CSG									
11,820.5	55.00	135.00	11,311.7	-355.3	1,855.3	1,793.0	0.00	0.00	0.00
11,825.0	55.81	135.00	11,314.3	-357.9	1,857.9	1,796.5	18.10	18.10	0.00
11,850.0	60.34	135.00	11,327.5	-372.9	1,872.9	1,817.0	18.10	18.10	0.00
11,875.0	64.86	135.00	11,339.0	-388.6	1,888.6	1,838.3	18.10	18.10	0.00
11,879.8	65.74	135.00	11,341.0	-391.7	1,891.7	1,842.5	18.10	18.10	0.00
Sunniland									
11,889.9	67.56	135.00	11,345.0	-398.2	1,898.2	1,851.4	18.10	18.10	0.00
Sunniland A									
11,900.0	69.39	135.00	11,348.7	-404.9	1,904.9	1,860.5	18.10	18.10	0.00
11,923.0	73.55	135.00	11,356.0	-420.3	1,920.3	1,881.4	18.10	18.10	0.00
Sunniland B									
11,925.0	73.91	135.00	11,356.6	-421.6	1,921.6	1,883.3	18.10	18.10	0.00
11,950.0	78.44	135.00	11,362.5	-438.8	1,938.8	1,906.6	18.10	18.10	0.00
11,975.0	82.96	135.00	11,366.6	-456.2	1,956.2	1,930.4	18.10	18.10	0.00
12,000.0	87.49	135.00	11,368.7	-473.9	1,973.9	1,954.3	18.10	18.10	0.00
12,013.9	90.00	135.00	11,369.0	-483.7	1,983.7	1,967.7	18.10	18.10	0.00
Sunniland C									
12,013.9	90.00	135.00	11,369.0	-483.7	1,983.7	1,967.7	0.00	0.00	0.00
27-3 - Heel									
12,100.0	90.00	135.00	11,369.0	-544.6	2,044.6	2,050.5	0.00	0.00	0.00
12,200.0	90.00	135.00	11,369.0	-615.3	2,115.3	2,146.8	0.00	0.00	0.00
12,300.0	90.00	135.00	11,369.0	-686.0	2,186.0	2,243.0	0.00	0.00	0.00
12,400.0	90.00	135.00	11,369.0	-756.7	2,256.7	2,339.2	0.00	0.00	0.00
12,500.0	90.00	135.00	11,369.0	-827.4	2,327.4	2,435.4	0.00	0.00	0.00
12,600.0	90.00	135.00	11,369.0	-898.1	2,398.1	2,531.6	0.00	0.00	0.00
12,700.0	90.00	135.00	11,369.0	-968.8	2,468.8	2,627.8	0.00	0.00	0.00
12,800.0	90.00	135.00	11,369.0	-1,039.5	2,539.5	2,724.0	0.00	0.00	0.00
12,900.0	90.00	135.00	11,369.0	-1,110.2	2,610.2	2,820.3	0.00	0.00	0.00
13,000.0	90.00	135.00	11,369.0	-1,181.0	2,681.0	2,916.5	0.00	0.00	0.00
13,100.0	90.00	135.00	11,369.0	-1,251.7	2,751.7	3,012.7	0.00	0.00	0.00
13,200.0	90.00	135.00	11,369.0	-1,322.4	2,822.4	3,108.9	0.00	0.00	0.00
13,300.0	90.00	135.00	11,369.0	-1,393.1	2,893.1	3,205.1	0.00	0.00	0.00
13,400.0	90.00	135.00	11,369.0	-1,463.8	2,963.8	3,301.3	0.00	0.00	0.00
13,500.0	90.00	135.00	11,369.0	-1,534.5	3,034.5	3,397.6	0.00	0.00	0.00
13,600.0	90.00	135.00	11,369.0	-1,605.2	3,105.2	3,493.8	0.00	0.00	0.00

Database:	EDM-BoHolland	Local Co-ordinate Reference:	Well 27-3
Company:	Breitburn Florida LLC	TVD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Project:	Raccoon Point Field	MD Reference:	36' RKB - MSL @ 36.0usft (36' Orig, Elevation)
Site:	PAD 4	North Reference:	Grid
Well:	27-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST02 - Horizontal		
Design:	Plan #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.00	135.00	11,369.0	-1,675.9	3,175.9	3,590.0	0.00	0.00	0.00
13,800.0	90.00	135.00	11,369.0	-1,746.6	3,246.6	3,686.2	0.00	0.00	0.00
13,900.0	90.00	135.00	11,369.0	-1,817.4	3,317.4	3,782.4	0.00	0.00	0.00
14,000.0	90.00	135.00	11,369.0	-1,888.1	3,388.1	3,878.6	0.00	0.00	0.00
14,013.9	90.00	135.00	11,369.0	-1,897.9	3,397.9	3,892.0	0.00	0.00	0.00
27-3 - BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
27-3 - CSG - plan hits target center - Point	0.00	0.00	11,306.0	-349.5	1,849.5	604,931.68	526,586.52	25° 59' 52.664 N	80° 55' 8.607 W
27-3 - Heel - plan hits target center - Point	0.00	0.00	11,369.0	-483.7	1,983.7	604,797.49	526,720.72	25° 59' 51.334 N	80° 55' 7.137 W
27-3 - BHL - plan hits target center - Point	0.00	0.00	11,369.0	-1,897.9	3,397.9	603,383.37	528,134.83	25° 59' 37.318 N	80° 54' 51.648 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
250.0	250.0	20" CSG	20	22
2,180.0	2,180.0	13 3/8"	13-3/8	17-1/2
3,990.0	3,989.9	9 5/8"	9-5/8	12-1/4
11,810.5	11,306.0	7"	7	9-7/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
11,733.8	11,262.0	TRN_C_FLOW_ZN_TOP		0.00	
11,754.7	11,274.0	TRN_C_FLOW_ZN_BS		0.00	
11,805.3	11,303.0	TRN_C_BASE		0.00	
11,810.5	11,306.0	Lake Trafford		0.00	
11,879.8	11,341.0	Sunniland		0.00	
11,889.9	11,345.0	Sunniland A		0.00	
11,923.0	11,356.0	Sunniland B		0.00	
12,013.9	11,369.0	Sunniland C		0.00	

ATTACHMENT 14

Cementing Program

The generic cementing program is detailed in the narrative materials submitted as the “Cementing Services Proposal” supplied by Halliburton. In as much as this well is a re-drill from an existing wellbore the portions of the cementing program below 6,500 feet will be used as applicable. Field modifications of this plan will occur as drilling conditions dictate.

HALLIBURTON

BreitBurn Florida LLC
600 Travis Street, Suite 4800
Houston, Texas 77002

27-3AHL
Raccoon Point Field
Collier County, Florida
United States of America

Cementing Services Proposal

Submitted by:
Randy Sullivan
Halliburton
1384 Sandersville-sharon Rd
Sandersville, Mississippi 39477
601.649.9290

HALLIBURTON

***Halliburton appreciates the opportunity to present
this proposal and looks forward to being of service to you.***

Foreword

Enclosed is our recommended procedure for cementing the casing strings in the referenced well. The information in this proposal includes well data, calculations, and materials requirements. This proposal is based on information from our field personnel and previous cementing services in the area.

Halliburton Energy Services recognizes the importance of supplying the **highest quality products and services** to our customers. Communication is a vital link in the cementing process. Changes in well condition which differ considerably from those provided for this recommendation should be discussed for changes in procedure or design. Laboratory testing, running of computer programs for job optimization, and equipment for the execution of this recommendation can be coordinated with the service center listed below.

Halliburton maintains Health, Safety & Environment (HSE) as a **top priority** and provides support on HSE matters as they relate to our business activities. Helping to define, establish and incorporate HSE responsibility and accountability through every level creates value for our customers. Our vision is to create an incident-free environment and to conduct business with no adverse environmental impact. By integrating HSE into all of our business activities, Halliburton demonstrates industry leadership in HSE performance.

Prepared by: _____
Cheryl Ballinger
Proposal Specialist

Submitted by: _____
Randy Sullivan
Account Representative

Service Center:	Sandersville,	MS
Cementing Coordinator:	Irvin Stewart or William Myrick	
Field Sales:	Jim Cerra or Randy Sullivan	
Phone Number:	(601)	649 - 9290

Job Information**Surface Casing**

27-3AHL

24" Conductor Casing	0 - 250 ft (MD)
Outer Diameter	24.000 in
Inner Diameter	22.500 in
Linear Weight	189 lbm/ft
20" Surface Open Hole	250 - 2200 ft (MD)
Inner Diameter	20.000 in
Job Excess	100 %
16" Surface Casing	0 - 2200 ft (MD)
Outer Diameter	16.000 in
Inner Diameter	15.010 in
Linear Weight	84 lbm/ft
Top of Lead Cement Slurry	Surface (MD)
Top of Tail Cement Slurry	1700 ft (MD)
Mud Type	Water Based Mud
Mud Weight	9 lbm/gal
BHST	105 degF

Calculations**Surface Casing**

Spacer:

$$\begin{aligned}\text{Total Spacer} &= 112.29 \text{ ft}^3 \\ &= 20.00 \text{ bbl}\end{aligned}$$

Cement : (1700.00 ft fill)

$$\begin{aligned}250.00 \text{ ft} * 1.3649 \text{ ft}^3/\text{ft} * 0 \% &= 341.23 \text{ ft}^3 \\ 1450.00 \text{ ft} * 0.7854 \text{ ft}^3/\text{ft} * 100 \% &= 2277.65 \text{ ft}^3 \\ \text{Total Lead Cement} &= 2618.88 \text{ ft}^3 \\ &= 466.44 \text{ bbl} \\ \text{Sacks of Cement} &= 1156 \text{ sks}\end{aligned}$$

Cement : (500.00 ft fill)

$$\begin{aligned}500.00 \text{ ft} * 0.7854 \text{ ft}^3/\text{ft} * 100 \% &= 785.40 \text{ ft}^3 \\ \text{Total Tail Cement} &= 785.40 \text{ ft}^3 \\ &= 139.88 \text{ bbl} \\ \text{Sacks of Cement} &= 687 \text{ sks}\end{aligned}$$

Shoe Joint Volume: (40.00 ft fill)

$$\begin{aligned}40.00 \text{ ft} * 1.2288 \text{ ft}^3/\text{ft} &= 49.15 \text{ ft}^3 \\ &= 8.75 \text{ bbl} \\ \text{Tail plus shoe joint} &= 834.55 \text{ ft}^3 \\ &= 148.64 \text{ bbl}\end{aligned}$$

Total Pipe Capacity:

$$= 481.50 \text{ bbl}$$

Displacement Volume to Shoe Joint:

$$\begin{aligned}\text{Capacity of Pipe - Shoe Joint} &= 481.50 \text{ bbl} - 8.75 \text{ bbl} \\ &= 472.74 \text{ bbl}\end{aligned}$$

Job Recommendation**Surface Casing**

Fluid Instructions

Fluid 1: Water Spacer

Fresh Water Ahead

Fluid Density: 8.30 lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

Halliburton Light Standard

4 % National Premium Gold (Light Weight Additive)

3 % Salt (Salt)

2 lbm/sk Pheno Seal Medium (Lost Circulation Additive)

Fluid Weight 12 lbm/gal

Slurry Yield: 2.27 ft³/sk

Total Mixing Fluid: 12.76 Gal/sk

Top of Fluid: 0 ft

Calculated Fill: 1700 ft

Volume: 466. 44 bbl

Calculated Sacks: 1156 .24 sks

Proposed Sacks: 1160 sks

Fluid 3: Tail Cement

Standard Cement

94 lbm/sk Standard Cement (Cement)

3 % Salt (Salt)

0.25 % CFR-3 (Dispersant)

Fluid Weight 15.50 lbm/gal

Slurry Yield: 1.21 ft³/sk

Total Mixing Fluid: 5.43 Gal/sk

Top of Fluid: 1700 ft

Calculated Fill: 500 ft

Volume: 148. 64 bbl

Calculated Sacks: 687. 44 sks

Proposed Sacks: 690 sks

Fluid 4: Top Out Cement

Standard Cement

94 lbm/sk Standard Cement (Cement)

2 % Calcium Chloride (Accelerator)

Fluid Weight 15 lbm/gal

Slurry Yield: 1.31 ft³/sk

Total Mixing Fluid: 6.09 Gal/sk

Proposed Sacks: 100 sks

Job Information***Intermediate Casing***

27-3AHL

16" Surface Casing	0 - 2200 ft (MD)
Outer Diameter	16.000 in
Inner Diameter	15.010 in
Linear Weight	84 lbm/ft
14-3/4" Intermediate Open Hole	2200 - 4200 ft (MD)
Inner Diameter	14.750 in
Job Excess	50 %
10-3/4" Intermediate Casing	0 - 4200 ft (MD)
Outer Diameter	10.750 in
Inner Diameter	9.950 in
Linear Weight	45.50 lbm/ft
Top of Cement Slurry	3700 ft (MD)
Mud Type	Water Based Mud
Mud Weight	9.20 lbm/gal
BHST	130 degF

Calculations**Intermediate Casing**

Spacer:

$$\begin{aligned} 160.00 \text{ ft} * 0.5563 \text{ ft}^3/\text{ft} * 50 \% &= 133.52 \text{ ft}^3 \\ \text{Total Spacer} &= 133.68 \text{ ft}^3 \\ &= 1000.00 \text{ Gal} \end{aligned}$$

Cement : (500.00 ft fill)

$$\begin{aligned} 500.00 \text{ ft} * 0.5563 \text{ ft}^3/\text{ft} * 50 \% &= 417.24 \text{ ft}^3 \\ \text{Total Primary Cement} &= 417.24 \text{ ft}^3 \\ &= 74.31 \text{ bbl} \\ \text{Sacks of Cement} &= 345 \text{ sks} \end{aligned}$$

Shoe Joint Volume: (40.00 ft fill)

$$\begin{aligned} 40.00 \text{ ft} * 0.54 \text{ ft}^3/\text{ft} &= 21.60 \text{ ft}^3 \\ &= 3.85 \text{ bbl} \\ \text{Tail plus shoe joint} &= 438.84 \text{ ft}^3 \\ &= 78.16 \text{ bbl} \end{aligned}$$

Total Pipe Capacity:

$$= 403.93 \text{ bbl}$$

Displacement Volume to Shoe Joint:

$$\begin{aligned} \text{Capacity of Pipe - Shoe Joint} &= 403.93 \text{ bbl} - 3.85 \text{ bbl} \\ &= 400.08 \text{ bbl} \end{aligned}$$

Job Recommendation

Intermediate Casing

Fluid Instructions

Fluid 1: Water Spacer

MUD FLUSH

Fluid Density: 8.50 lbm/gal

Fluid Volume: 1000 Gal

Fluid 2: Primary Cement

50/50 Poz Standard

3 % Potassium Chloride (Clay Control)

0.2 % CFR-3 (Dispersant)

1 lbm/sk Pheno Seal - Blend (Lost Circulation Additive)

Fluid Weight 13.80 lbm/gal

Slurry Yield: 1.27 ft³/sk

Total Mixing Fluid: 5.77 Gal/sk

Top of Fluid: 3700 ft

Calculated Fill: 500 ft

Volume: 78.1 6 bbl

Calculated Sacks: 345.00 sks

Proposed Sacks: 350 sks

Job Information***Production Casing***

27--3AHL

10-3/4" Intermediate Casing	0 – 4,200 ft (MD)
Outer Diameter	10.750 in
Inner Diameter	9.950 in
Linear Weight	45.50 lbm/ft
9-7/8" Production Open Hole	4,200 – 11,950 ft (MD)
Inner Diameter	9.875 in
Job Excess	35 %
7-5/8" Production Casing	0 – 11,950 ft (MD)
Outer Diameter	7.625 in
Inner Diameter	6.875 in
Linear Weight	33.70 lbm/ft
Top of Lead Cement Slurry	8,000 ft (MD)
Top of Tail Cement Slurry	9,800 ft (MD)
Mud Type	Water Based Mud
Mud Weight	9.50 lbm/gal
BHST	240 degF

Calculations**Production Casing**

Spacer:

$$\begin{aligned} 461.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} * 35 \% &= 133.65 \text{ ft}^3 \\ \text{Total Spacer} &= 133.68 \text{ ft}^3 \\ &= 1000.00 \text{ Gal} \end{aligned}$$

Spacer:

$$\begin{aligned} 461.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} * 35 \% &= 133.65 \text{ ft}^3 \\ \text{Total Spacer} &= 133.68 \text{ ft}^3 \\ &= 1000.00 \text{ Gal} \end{aligned}$$

Spacer:

$$\begin{aligned} 461.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} * 35 \% &= 133.65 \text{ ft}^3 \\ \text{Total Spacer} &= 133.68 \text{ ft}^3 \\ &= 1000.00 \text{ Gal} \end{aligned}$$

Cement : (1800.00 ft fill)

$$\begin{aligned} 1800.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} * 35 \% &= 521.96 \text{ ft}^3 \\ \text{Total Lead Cement} &= 521.96 \text{ ft}^3 \\ &= 92.96 \text{ bbl} \\ \text{Sacks of Cement} &= 281 \text{ sks} \end{aligned}$$

Cement : (2250.00 ft fill)

$$\begin{aligned} 2250.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} * 35 \% &= 652.46 \text{ ft}^3 \\ \text{Tail Cement} &= 652.46 \text{ ft}^3 \\ &= 116.21 \text{ bbl} \end{aligned}$$

Shoe Joint Volume: (40.00 ft fill)

$$\begin{aligned} 40.00 \text{ ft} * 0.2496 \text{ ft}^3/\text{ft} &= 9.98 \text{ ft}^3 \\ &= 1.78 \text{ bbl} \\ \text{Tail plus shoe joint} &= 662.44 \text{ ft}^3 \\ &= 117.99 \text{ bbl} \\ \text{Total Tail} &= 436 \text{ sks} \end{aligned}$$

Total Pipe Capacity:

$$\begin{aligned} 11,950.00 \text{ ft} * 0.2496 \text{ ft}^3/\text{ft} &= 3007.68 \text{ ft}^3 \\ &= 535.70 \text{ bbl} \end{aligned}$$

Displacement Volume to Shoe Joint:

$$\begin{aligned} \text{Capacity of Pipe - Shoe Joint} &= 535.70 \text{ bbl} - 1.78 \text{ bbl} \\ &= 533.92 \text{ bbl} \end{aligned}$$

Job Recommendation**Production Casing**

Fluid Instructions

Fluid 1: Reactive Spacer

3% Clay Fix II Water

Fluid Density: 8.60 lbm/gal

Fluid Volume: 1000 Gal

Fluid 2: Reactive Spacer

SUPER FLUSH 101

Fluid Density: 9.60 lbm/gal

Fluid Volume: 1000 Gal

Fluid 3: Reactive Spacer

3% Clay Fix II Water

Fluid Density: 8.60 lbm/gal

Fluid Volume: 1000 Gal

Fluid 4: Lead Cement

HTLD Cement

10 lbm/sk SSA-1 (Heavy Weight Additive)

5 % Potassium Chloride (Clay Control)

0.4 % Halad(R)-322 (Low Fluid Loss Control)

0.25 % D-AIR 3000 (Defoamer)

0.2 % HR-7 (Retarder)

Fluid Weight 12.80 lbm/gal

Slurry Yield: 1.86 ft³/sk

Total Mixing Fluid: 8.73 Gal/sk

Top of Fluid: 8000 ft

Calculated Fill: 1800 ft

Volume: 92.96 bbl

Calculated Sacks: 281 sks

Proposed Sacks: 285 sks

Fluid 5: Tail Cement

Premium Cement

94 lbm/sk Premium Cement (Cement)

35 % SSA-1 (Additive Material)

5 % Potassium Chloride (Clay Control)

5 % Microbond HT (Gas Migration Control)

0.8 % Halad(R)-322 (Low Fluid Loss Control)

0.1 % WG-17 (Suspension Agent)

0.2 % HR-7 (Retarder)

Fluid Weight 16.20 lbm/gal

Slurry Yield: 1.52 ft³/sk

Total Mixing Fluid: 5.87 Gal/sk

Top of Fluid: 9800 ft

Calculated Fill: 2250 ft

Volume: 117.99 bbl

Calculated Sacks: 436 sks

Proposed Sacks: 440 sks

ATTACHMENT 15

Drilling Fluids Program

Halliburton Fluid Systems developed the recommended drilling fluid program. In as much as this well is a re-drill from an existing wellbore the portions of the drilling fluids program below 6,500 feet will be used as applicable. Field modifications of this plan will occur as drilling conditions dictate.

**BreitBurn Florida, LLC
P.O. Box 3236
Immokalee, FL 34143**

**Collier Land and Cattle
Corporation 27-3AHL**

**Raccoon Point Field
Collier Co., FL**

Submitted by David Roberts
Halliburton Fluid Systems
1384 Sharon/Sandersville Road
P.O. Box 622, Sandersville, MS 39477
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HALLIBURTON

Fluid Systems



1.0 REFERENCE WELLS

1. Exxon, Collier Land & Cattle Corp.,
Section 27-T51S-R34E, TD 12,370', 40 days.
2. Exxon, Collier Land & Cattle Co. 27-2,
Section 27-T51S-R34E, TD 12,370', 40 days.
3. Exxon, Oleum 34-3,
Section 33-T51S-R34E, TD 11,980', 26 days.
4. Sabine Corp., Collier Co. 18-2,
Section NW ¼ 18-T50S-R29E, TD 11,755', 33 days.
5. Pacific Enterprises, Also Land Dev. #3-1,
Section 3-T46-R28E, TD 11,620', 34 days.
6. Exxon, Collier Land & Cattle Corp 34-1,
Section 34-T51S-R34E, TD 13,258', 32 days.
7. Exxon, Collier Land & Cattle 2-1,
Section 2-T52S-R34E, TD 12,712', 64 days.
8. Exxon, Collier Land & Cattle 2-4,
Section 2-T52S-R34E, TD 13,325', 82 days.
9. Exxon , Oleum 2-3,
Section 52-T52S-R34E, TD 12,758', 17 days.
10. Exxon, Collier Land Company 28-4,
Section 28-T51S-R34E, TD 11,600', 42 days.

Estimated Days: 47

1.1 Casing Program

- **Surface Casing**
24 inches @ 250 MD feet+- Drive pipe. Drill out in 20" hole.

16 inches @ 2,200 MD feet+- Drill out in 14 3/4" hole.
- **Intermediate Casing**
10 3/4 inches @ 4,200 feet+- Drill out in 9 7/8" hole.

7 5/8 inches @ 11,950 MD feet+- Drill out in 4 3/4" hole for lateral.
- **Production Casing** Open Hole Completion @ 14,230' MTD.

1.1.1 Suggested Drilling Fluid Properties

Depth (ft)	Weight (lb/gal.)	Viscosity (sec./qt.)	PH	Filtrate (ml)	Days
0'- 250'	8.5-8.6	44-60	9.5	30-20	1 1/2
Drive 24" Casing @ 250'					1
0'- 2,200'	8.8-8.9	44-60	9.5	30-20	3 1/2
Set 16" Casing @ 2,200'					2
2,200'- 2,800'	8.8-8.9	40-50	9.5	30-20	2
2,800'- 4,200'	8.6-8.9	28-34	9.5	NC-30	3
Set 10 3/4" Intermediate Casing @ 4,200'					2
4,200'- 6,000'	8.6-8.9	30-34	9.5	30-25	3
6,000'- 7,350'	8.8-9.0	30-34	9.5	50-30	3
7,350'- 9,000'	8.8-9.1	30-34	9.5	50-30	4
9,000'-12,401'	8.8-9.2	30-34	9.5	40-25	7
Set 7 5/8" Casing @ 11,950'					3
11,950'-14,230'	8.8-9.0	30-36	10.0	30-15	12
TOTAL					47

ESTIMATED FORMATION TOPS

BreitBurn Florida, LLC
Collier Land and Cattle Corporation 27-3AHL
14,230' MD Sunniland Horizontal Test
Raccoon Point Field
Collier Co., FL

	(TVD)	
Elevation	35'	KB
Cedar Keys Anhydrite	4,077'	+-
Upper Cretaceous	5,300'	+-
Eagleford	8,315'	+-
Lower Cretaceous	8,463'	+-
Fredericksburg "A"	9,082'	+-
Fredericksburg "B"	9,529'	+-
Trinity "A"	10,018'	+-
Trinity "B"	11,027'	+-
Trinity "C"	11,261'	+-
Sunniland	11,341'	+-
Punta Gorda	11,810'	+-

Interval 250'-2,200' Mud Type LSND/AQUAGEL®/CAUSTIC Days 8**ANTICIPATED PROBLEMS:**

Massive sand, lost circulation, possible water flows, trouble cementing 16" casing.

RECOMMENDED SOLIDS CONTROL EQUIPMENT: CLOSED-LOOP SYSTEM

Rig Shale Shakers
Flowline Cleaner
Centrifuge
Desander
Desilter
Processing Tank

MUD ADDITIVES: AQUAGEL, BAROID®, CAUSTIC SODA, S.A.P.P.®, SODA ASH, MEDIUM L.C.M., X-TEND®II, LIME**1.1.2 Suggested Drilling Fluid Properties**

Depth (ft)	Weight (lb/gal.)	Viscosity (sec./qt.)	PH	Filtrate (ml)	Days
0'- 250'	8.5-8.6	44-60	9.5	30-20	1 ½
250'- 2,200'	8.8-8.9	44-60	9.5	30-20	3 ½

After driving 24" casing, build suitable mud system before drilling out. Tourly treatments of **AQUAGEL, X-TEND II, CAUSTIC** and **SODA ASH** will be needed to keep viscosity, pH and total hardness within desired ranges. Run all solids equipment and water – as much as possible – to keep mud weight at 8.8-8.9 during this interval.

Be prepared to control-drill sand sections to allow solids handling system to process all of the fluid and prevent excessive sand and mud solids buildup in the tanks.

Use **AQUAGEL/LIME** high viscosity pills to help in hole cleaning.

Lost circulation and water flows are a possibility, but the occurrence has been inconsistent, between the reference wells. The best plan is to maintain plenty of **AQUAGEL** in the system, keep the hole clean, and maintain mud weights.

Hole-opening work should be done very cautiously. Twist offs due to high torque are a continuous possibility with the large bottom hole assemblies.

Interval 250'-2,200' **Mud Type** LSND/AQUAGEL®/CAUSTIC **Days** 8

The state of Florida requires cement to the surface on the 16" casing. When casing is on bottom, circulate as long as needed to establish good hole conditions before beginning cementing. Watch for cement returns at the surface and be prepared to bypass any excess cement to the storage tanks. Cement procedure may require a top-out job on the 16" casing.

TOPS	
Elevation 35'	KB

CUMULATIVE DAYS: 8 (including 2 ½ days to drive 24" casing and 2 days to set 16" casing)

Interval 2,200'-4,200' Mud Type LSND/AQUAGEL pills**Days 5****ANTICIPATED PROBLEMS:**

Massive sand, salt water influx, lost circulation in boulder zone, torque and drag in the boulders.

RECOMMENDED SOLIDS CONTROL EQUIPMENT: CLOSED-LOOP SYSTEM

Rig Shale Shakers
Flowline Cleaner
Centrifuge
Desander
Desilter
Processing Tank

MUD ADDITIVES: **AQUAGEL, BAROID, CAUSTIC SODA, S.A.P.P., L.C.M., X-TEND II, LIME****1.1.3 Suggested Drilling Fluid Properties**

Depth (ft)	Weight (lb/gal.)	Viscosity (sec./qt.)	PH	Filtrate (ml)	Days
2,200' - 2,800'	8.8-8.9	40-50	9.5	30-20	2
2,800' - 4,200'	8.6-8.9	28-34	9.5	NC-30	3

We recommend drilling out of 16" casing with mud. Adjust pH and total hardness with **CAUSTIC SODA** and **SODA ASH**. We expect complete lost circulation to occur in top of the boulder zone near 2,800'. After losing circulation, mix and pump thick **AQUAGEL/LIME** sweeps as needed to clean hole.

Heavy drill string torque and drag is common in drilling the boulder section. Patience in drilling and in reaming connections is required. Continue to pump gel pills even though we will not see returns.

We do not have exact offset information showing the base of the boulders. Monitor drilling rate and formation tendency to determine when we're below the boulders. The 10 3/4" casing must be set through the boulder zone. Circulate and pump at least two thick pills at total depth. Might consider spotting 60-80 bbls of thick **AQUAGEL** slurry on bottom before POOH to run 10 3/4" casing. Don't rotate pipe on trip out for 10 3/4" casing.

CUMULATIVE DAYS: 13 (including days to set casing)

Water/AQUAGEL Pills**Interval 4,200'-12,345' Mud Type LSND/CARBONOX/PAC-R****Days 19****ANTICIPATED PROBLEMS:**

Massive sand, hole cleaning, lost circulation, salt water flow, torque and drag.

RECOMMENDED SOLIDS CONTROL EQUIPMENT: CLOSED-LOOP SYSTEM

Rig Shale Shakers
 Flowline Cleaner
 2 Centrifuges
 Desander
 Desilter
 Processing Tank

MUD ADDITIVES: **AQUAGEL, BAROID, CAUSTIC SODA, SODA ASH, MICA®,
 BAROLUBE GOLD SEAL®, PAC-R®, CARBONOX®,
 BIOGEL®, LIME**

1.1.4 Suggested Drilling Fluid Properties

Depth (ft)	Weight (lb/gal.)	Viscosity (sec./qt.)	PH	Filtrate (ml)	Days
4,200' - 6,000'	8.6-8.9	30-34	9.5	30-25	3
6,000' - 7,350'	8.8-9.0	30-34	9.5	50-30	3
7,350' - 9,000'	8.8-9.1	30-34	9.5	50-30	4
9,000' - 12,345'	8.8-9.2	30-34	9.5	40-25	7

Drill out of 10 3/4" casing with lightly treated mud. Maintain system as hole conditions require. Pump sweeps to clean hole as often as necessary. Twice per tour seems to be adequate as long as the hole is clean. Monitor chlorides and calcium closely in case of salt water flows through this interval. Adjust mud weight as necessary to control salt water flows and lost circulation to sand sections. Add small amounts of **CAUSTIC SODA** to keep pH at 9.0-9.5 for drill pipe protection and add **SODA ASH** if needed to adjust calcium at 80-100 ppm.

We expect massive sands in the 5,000'-7,000' interval. We don't expect any hole instability, but should plan to continue AQUAGEL sweeps as needed for good hole cleaning. Torque and drag will be much improved if the annulus is kept free of excessive drill solids.

Although water is the drilling fluid of choice, it's possible that hole problems may necessitate mudding up. Mix materials as needed to improve torque and drag problems. We've also had success with **BAROLUBE GOLD SEAL** a non-polluting lubricant. Maintain the system in this manner to the Trinity "C". At that point,

Water/AQUAGEL Pills**Interval 4,200'-12,345' Mud Type LSND/CARBONOX/PAC-R****Days 19**

Watch for the Trinity "C" salt water flow and condition the mud to control the Trinity "C" and improve hole conditions.

ZEOGEL may be used to build viscosity if circulating fluid chlorides and calcium are too high for use of **AQUAGEL** bentonite.

Well plan is to drill directional pilot hole to 12,345', log and prepare to plug back to run 7 5/8" casing at 11,950'.

TOPS	
Cedar Keys Anhydrite	4,077'+-
Upper Cretaceous	5,300'+-
Eagleford 8,315'+	-
Lower Cretaceous	8,463'+-
Fredericksburg "A"	9,082'+-
Fredericksburg "B"	9,529'+-
Trinity "A"	10,018'+-
Trinity "B"	11,027'+-
Trinity "C"	11,261'+-
Sunniland 11,341'+	-
Punta Gorda	11,810'+-

CUMULATIVE DAYS: 32 (including days to set casing)

Interval **11,950'-14,230'** Mud Type **Water/BARAVIS®** Days **15****ANTICIPATED PROBLEMS:**

Torque and drag in lateral section, salt water flows, stuck pipe, hole cleaning.

RECOMMENDED SOLIDS CONTROL EQUIPMENT: CLOSED-LOOP SYSTEMRig Shale Shakers
Flowline Cleaner
2 Centrifuges
Desander
Desilter
Processing Tank**MUD ADDITIVES:** Freshwater, BARAVIS®/HEC, CAUSTIC SODA, BAROID, PAC-R, BARAZAN D PLUS®, ALDACIDE G®, SODA ASH, LUBRA BEADS®, BAROLUBE GOLD SEAL®**1.1.5 Suggested Drilling Fluid Properties**

	Depth (ft)	Weight (lb/gal.)	Viscosity (sec./qt.)	PH	Filtrate (ml)	Days
1	1,950'-14,230'	8.8-9.0	30-36	10.0	30-15	12

After reaching pilot hole TD of 12,345', well plan is to plug back in open hole, and run 7 5/8" casing to 11,950'. After 7 5/8" casing is run and cemented, plan to discard the saltwater contaminated fluid and drill the Sunniland with water and **BARAVIS/HEC** sweeps. The **BARAVIS** material produces quick viscosity in both fresh and brackish fluids.

If a saltwater flow re-occurs, there is the option to pump the contaminated system to the boulder zone and then build a new system using fresh make-up water. Condition the new system as needed to balance BHP in the Sunniland and provide viscosity and filtration control (if necessary).

The well plan includes building angle in order to be near 90° in the Sunniland pay zone and continue drilling a 1,500'-2,000' lateral section.

Maintain system properties as noted above. As hole angle and lateral section length increases, greater attention is needed to insure adequate hole cleaning. More high viscosity sweeps may be needed, and may be incorporated in to the system to build rheology, if needed. For extra carrying capacity and sweep efficiency, consider weighting the sweeps to 10.5 ppg with **BARACARB 5®**.

Interval 11,950'-14,230' Mud Type Water/BARAVIS® Days 15

All additives used in the lateral interval should be degradable or acid soluble. The Sunniland is expected to be normal pressured, but if greater density is needed, brine water or sack sodium chloride salt may be used. Drill pipe slugs can be built from brine water, sack salt, or **BARACARB** calcium carbonate.

Suspension of solids in pills, slugs and in the active system can be provided by **BARAZAN D PLUS**.

Maintain 10.0-10.5 pH with **CAUSTIC SODA**.

ALDACIDE G is effective as a biocide to protect the **BARAVIS/HEC** and **BARAZAN** from bacterial attack.

If torque and drag become excessive, or a lubricity pill for sliding is needed, isolate 30-50 bbls of fluid in the slugging tank, and mix **BAROLBE GOLD SEAL** at 3%-4% concentration and **LUBRA BEADS** at 4-6 ppb.

Mix and pump at least two high viscosity sweeps at TD to be sure hole is clean for logging.

If successful, well is planned as open hole completion under the 7 5/8" casing.

CUMULATIVE DAYS: 47

Mud Products Selection

AQUAGEL®	Sodium Montmorillonite. Provides viscosity and gelling characteristics to most water-based drilling fluids.
BARACARB®	An acid-soluble weighting and bridging agent. This high purity ground limestone is available in several grades. BARACARB is 100% acid soluble.
BARANEX®	A modified lignin powder. Provides filtration control at temperatures approaching 400°F. Replaces basic filtration polymers that lose their ability to control HTHP filtration rates at elevated temperatures.
BAROFIBRE®	A fibrous cellulosic material. It is designed to seal the bore hole wall in sands and fractured zones. 2-10 ppb as a preventive treatment, 30-90 ppb as a slug treatment. 58% acid soluble in 15% HCL acid.
BAROID®	Ground barium sulfate. Use to increase densities of water-based and oil-based drilling fluids to 21 ppg.
BAROLIFT®	A treated monofilament fiber that is designed to sweep vertical and horizontal wells which aids in carrying capacity.
BAROSEAL®	A combination of granules, flakes and fibers. Can be used with most water-based drilling fluids to seal loss zones. 5-20 ppb as a preventive treatment, 30-50 ppb as a slug treatment.
BARO-TROL®	A dispersible asphalt blend, used as a shale stabilizer, cuttings dispersion inhibitor, torque reducer and high temperature fluid loss additive. It coats the shales and cuttings which lowers dispersion and/or aggregation.
CARBONOX®	A powdered leonardite. Can be used to aid in filtration control and control viscosity and gel strengths of water-based fluids. Can also emulsify oil into water-based fluids.
CAUSTIC	Sodium Hydroxide. Provides PH and alkalinity to drilling fluids.
CLAY GRABBER®	A flocculant and a clay encapsulator. Its unique polymer chain stops shale dispersion and helps stabilize shales in the wellbore.
CON-DET®	A blend of water-soluble anionic surfactants used as a wetting agent. Counteract the sticking tendencies of clays and thereby reduce well-packing, bit balling and formation of mud rings.
EZ-MUD DP®	A partially hydrolyzed polyacrylamide/polyacrylate (PHPA). Used to stabilize reactive clays and shale formations. It quickly viscosifies fresh water systems.

EZ-SPOT®	A concentrated blend of emulsifiers, lubricants and viscosifiers. When added to base oil and mixed with water, it forms a stable invert emulsion to help free differentially stuck pipe.
MICA®	A ground Mica. Used in water and oil-based systems to counteract whole mud losses. Effective in sealing exposed fractures and permeable zones.
PAC-R®	A high molecular weight polyanionic cellulose. Provides filtration control and control viscosity and gel strengths of water-based fluids. Can also emulsify oil into water-based fluids.
QUIK-THIN®	A ferrochrome lignosulfonate, a dispersant for water-based systems. Provides secondary filtration control, effective in high calcium environments and improves filter-cake quality.
S.A.P.P.®	Sodium acid pyrophosphate. A thinner in low PH muds and calcium sequestering agent.
X-TEND II®	Polyacrylate/polyacrylamide co-polymer. Used to extend the yield of bentonite clays in water-based fluids. Acts as a selective flocculant to coagulate colloidal solids.

® is a registered trademark of Halliburton Fluids Systems

Personnel

<u>NAME</u>		<u>EXP.</u>		<u>LOCATION</u>	<u>PHONE NUMBERS</u>
Larry Faggert <i>Service Manager</i>	33	yrs	Hat	tiesburg, MS	601-261-0057
David Roberts <i>Principal Tech. Professional</i>	35	yrs	Laurel,	MS	601-649-3447
Don Bridges <i>Sales Engineer</i>	34	yrs	Hat	tiesburg, MS	601-264-5104
Tim Gordy <i>Sales Engineer</i>	41	yrs	Hat	tiesburg, MS	601-261-3329
Jerry Hodges <i>Sales Engineer</i>	31	yrs.	Elli	s ville, MS	601-477-3118
Brian Guy <i>Sales Engineer</i>	8	yrs	T	ylertown, MS	601-876-6404
Shawn Steverson <i>Sales Engineer</i>	7	yrs	Hat	tiesburg, MS	601-583-8147
Brandon Davis <i>Sales Engineer</i>	2	yrs	Sta	rkville, MS	662-324-6528

Stockpoint

Sandersville, MS	Garret	Rowell	601-64	9-9290
		<i>Service Coordinator</i>		