

APPENDIX A
MASTER SURFACE USE AND OPERATIONS PLAN
MASTER DRILLING PLAN

**KENNEDY OIL
MASTER SURFACE USE AND OPERATIONS PLAN
BIG RED COAL CBNG
SWEETWATER COUNTY, WYOMING**

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

1. **WELL LOCATIONS:**

- A. The proposed well sites have been staked.
- B. A plat of the surveyed location, signed by a State of Wyoming licensed surveyor, will be attached to each individual APD.

2. **EXISTING ACCESS ROADS (RESOURCE ROADS):**

- A. The project area is approximately 56 miles east on I-80 exit at Sweetwater County 67 (Tipton Road) travel 22.5 miles north, turn left 2.5 miles to the lease road. From this point it is 4 miles to the 41-35 location and 5 miles to the 43-26 location.
- B. Please refer to the map labeled *Exhibit 1* for existing access roads. Existing roads that are not county roads are called 'resource roads' on the map and the mileage to the project area is clearly marked.
- C. The existing access roads will be maintained in the same or better condition as existed prior to the commencement of operations, and said maintenance will continue until final abandonment and reclamation of the well location.

3. **NEW/PROPOSED ACCESS ROADS (RESOURCE ROADS):**

- A. New access routes necessary to each well are shown on the map(s) labeled *Exhibit 1* submitted with this Plan. These have been marked by stakes every 300' or within line-of-sight. New access roads are called 'proposed resource' on the map and the mileage to each well site is clearly marked.
- B. The operator shall upgrade the road to BLM standards (including crowning, ditching, and drainage culverts) to ensure safe, environmentally sound access. Width: 16-foot running surface, crowned and ditched, flat bottom ditches, with maximum ROW width of 80 feet, and adequately drained. See *Exhibit 2, Geometric Standards for Bureau Roads*.
- C. Culverts will be placed where necessary or as directed by BLM's Authorized Officer and will be a minimum diameter of 18". The road will have an adequate crown to allow a minimum of 12 inches of fill over culverts. A permanent marker will be installed at both ends of the culvert to help keep traffic from running over the ends. Culverts will have to have a minimum of 12" of fill or one-half the pipe diameter whichever is greater. The inlet and outlet will be set flush with existing ground and lined up in the center of the draw. The bottom of the pipe will be bedded on good material before backfilling. Backfill with unfrozen material and no rocks larger than two (2) inches in diameter. The holder shall furnish and install culverts of the gauge, materials, diameters and lengths required in BLM Manual 9113. Culverts shall be free of corrosion, dents

or other deleterious conditions. Culverts shall be placed on channel bottoms on firm, uniform beds which have been shaped to accept them and aligned to minimize erosion. Backfill shall be thoroughly compacted. No equipment shall be routed over a culvert until backfill depth is adequate to protect the culverts. Care shall be exercised to thoroughly compact the back fill under the haunches of the culvert. Tamp each corrugation with a shovel handle. The backfill shall be brought up evenly in 6" layers on both sides of the culvert. Each layer will be wheel rolled.

- D. Before any roadwork starts the topsoil must be bladed to the side of the road. The roadbed subgrade shall be scarified for its full width and to a depth sufficient to eliminate surface irregularities. The scarified surface shall then be bladed and shaped to the lines, grades, dimensions and typical cross section shown on the diagram referenced in the stipulations for this well. Compaction of scarified material as bladed and shaped in accordance with these specifications shall be achieved by routing construction equipment over the full width of the roadbed.
- E. Road out slopes shall have topsoil respread over them, and reseeding shall be completed using the seed mixture specified by surface owner.
- F. When construction is completed, all disturbed areas beyond the road and drainage ditches will be restored to the original contour. Prior to reclamation or abandonment of the access road, a joint inspection of the disturbed area will be held. This inspection will be held to review the existing or agree to a new acceptable reclamation plan.
- G. Topsoil shall be uniformly spread over all unoccupied disturbed areas (outside the ditch line, fence line, work area). Spreading shall not be done when the ground or topsoil is frozen or wet.
- H. If snow removal activity is undertaken off traveled ways, equipment used shall be equipped with shoes to keep the blade six (6) inches above the natural ground surface. Special precautions shall be taken where the surface of the ground is uneven and at drainage crossings to ensure that equipment does not destroy vegetation. Location of snow stockpiles, if needed, shall be approved by the authorized officer in advance. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of FOUR inches deep, the soil shall be deemed too wet to adequately support construction equipment.
- I. Cut slopes will be constructed no steeper than 2:1 grade. Fill slope will be constructed no steeper than 2:1 grade. The bottom of the ditch will be flat in order to elevate the road. Turnouts will be intervisible and/or spaced and a minimum of 1000 feet.
- J. Topsoil shall be stripped to a depth of 6 inches and will be windrowed to both edges of the road for later spreading over cut slopes if the well is productive, or replacement on the roadway after recontouring if the well is dry.
- K. Drainage facilities shall include ditches, water bars, culverts, etc. as necessary. Placement shall be determined as necessary to provide adequate, year-round drainage. After the road is crowned and ditched with a .03 - .5 ft. crown the topsoil shall be pulled back down on the cut slope so there is no berm left at the top of the cut slope.
- L. Slopes from the travelway to the bottom of the ditches will be approximately 4:1 grade.
- M. Vegetative debris is not permitted in or under fill embankments.
- N. All road segments must be completed, including any required surfacing, before any equipment moves onto the pad. If production is established, the travelway will be surfaced with a minimum of 4 inches of aggregate material. If production is established, surfacing materials will be purchased from a local contractor having a permitted source of materials in the area. Spot surfacing of the access road in those areas where erosion or rutting potential is high due to clay or

silt soil types or due to grace, shall be completed prior to moving any equipment onto the pad. If production is established, surfacing of the remainder of the road will then be required.

- O. Operations will not be conducted using frozen or saturated soil material or during periods when watershed damage or excessive rutting is likely to occur. The access road will be utilized only under dry conditions. The access road will be winterized by providing a well-drained travelway to minimize erosion and other damage to the roadway or the surrounding public land. Unless otherwise exempted, free and unrestricted public access will be maintained on the access road.

4. LOCATION OF EXISTING WELLS:

- A. All wells (water, injection, disposal, producing, abandoned and drilling) within a one-mile radius of the BIG RED Project Area are identified on *Exhibit 3 with all well codes shown on Exhibit 4* attached.

5. WELLSITE LAYOUT:

- A. Rig Layout/Cut and Fill schematic will be attached to each individual APD.
- B. The schematic shows the drill site layout as staked. Cross sections have been drafted to visualize the planned cuts and fills across the location.
- C. No permanent living facilities are planned. There may be three (3) trailers on location; one each for the mud logger, geologist and toolpusher.

6. PADS AND PITS/CONSTRUCTION/OPERATIONS:

- A. Rig Layout/Cut and Fill schematic and well survey plats will be attached to each individual APD.
- B. All equipment and vehicles will be confined to the access road and well pad. Construction-related traffic shall be restricted to routes approved by the authorized officer. New access roads or cross-country vehicle travel will not be permitted unless prior written approval is given by the authorized officer. Authorized road used by the holder shall be rehabilitated or maintained when construction activities are complete as approved by the authorized officer.
- C. Remove the top six inches of soil from the location including areas of cut, fill, and/or subsoil storage areas and stockpile at the site (see Rig Layout/Cut & Fill schematic for location of topsoil stockpiles, if applicable). The topsoil will be clearly segregated from excess spoil material. If ground frost prevents the segregation and removal of the topsoil material from the less desirable subsoil material, cross-ripping to the depth of the topsoil material may be necessary. If there is snow on the ground when construction begins, the operator will remove it before the soil is disturbed and pile it downhill from the topsoil stockpile location.
- D. The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved and where it doesn't impede watershed and drainage flows.
- E. Construct the backslope no steeper than 1:1. Construct the foreslope no steeper than 1:1.
- F. A flare pit will be constructed on the well pad for use during drilling operations. It will be located at least 125 feet from the well head.

- G. The reserve pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit, and oriented to prevent collection of surface runoff. Topsoil and spoil from the pit will be stored on location.
- H. An 18" high berm of compacted subsoil shall be constructed at the top of all fill slopes and shall tie into the cut slopes.
- I. The reserve pit will be fenced on three non-working sides during drilling, and the fourth side at the time the rig is removed, using woven wire and 2 top strands barbed wire held in place by line posts and wooden corner 'H' braces, to protect livestock and wildlife.
- J. Construction will not be done using frozen material, or during periods when the soil material is saturated, or when watershed damage is likely to occur.
- K. All equipment and vehicles will be confined to the access road, pad, and area specified in the APD.
- L. Rat and mouse holes shall be filled and compacted from the bottom to top immediately upon release of the drilling rig from the location.

7. CONSTRUCTION MATERIALS:

- A. No construction materials will be needed for well pad construction
- B. No construction materials will be taken from Federal and/or Indian lands without prior approval from the appropriate Surface Management Agency.
- C. If production is established, any construction materials needed will be purchased from a local supplier having a permitted source of materials.
- D. No new access roads for construction materials will be required.
- E. All construction equipment will be kept clean and weed-free so as to control any spread of noxious weeds.

8. LOCATION AND TYPE OF WATER SUPPLY:

- A. Water for drilling will be obtained from a Kennedy State well located in Section 36, T23N, R97W.
- B. The necessary ROW(s) needed from the BLM, Rawlins Field Office, will be applied for concurrently with the POD submittal.
- C. Water for drilling will be transported by truck to the drill-site for each well.

9. METHODS OF HANDLING WASTE MATERIALS:

- A. Cuttings: deposited in the reserve pit.
- B. Drilling fluids: will be contained in the reserve pit and allowed to evaporate.
- C. Sewage: Sewage and gray water will be disposed of into a portable, chemically-treated latrine and disposed of into a State of Wyoming DEQ approved disposal site. A portable, chemically-treated, self-contained latrine accessible to several well-sites will remain in the area of the wells being drilled and completed through termination of completion operations.
- D. Garbage and other waste materials: Trash and other solid waste including cans, cable, etc., will be contained in portable trash containers. The trash containers will be disposed of into a State of

- Wyoming DEQ approved sanitary landfill as needed and/or upon completion of operations. No trash will be placed in the reserve pit.
- E. Chemicals/Change Oil: Any chemical substances or any used motor oil (change oil) will be placed in closed containers and disposed of at an authorized disposal site. It will not be disposed of in the reserve pit on any location.
 - F. Other: Immediately after removal of the drilling rig, all debris and waste materials not contained in the trash cage will be cleaned up and removed from the well location. No adverse materials will be left on the location.
 - G. Hazardous Materials: The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of this well will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. A file will be maintained containing current Material Safety Data Sheets for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.
 - H. Produced Fluids: Hydrocarbons produced during completion operations will be placed in test tanks on the location. Water produced during completion operations will be put into the reserve pit as per NTL-2B. Any spills of oil, gas, salt water or other noxious fluids or solids will be cleaned up and removed to an approved disposal site.
 - I. Produced Water: Produced water will be trucked or piped to a properly permitted water disposal/injection facility for re-injection into an aquifer approved by the WOGCC.

10. ANCILLARY FACILITIES

- A. None anticipated.

11. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES (FOR PRODUCTION):

- A. ON WELL LOCATION: A schematic showing a proposed producing well site configuration is attached to this plan, marked *Exhibit 5*. Facilities include: a) pumping unit with a propane fired engine (convertible to natural gas) (See attached Engine Specs *Exhibit 6*); b) water storage tank(s) with pump or off-loading system (isolated by dikes); and c) metering equipment.
- B. OFF WELL LOCATION: New infrastructure, i.e. buried pipelines, water lines, etc., will be necessary to each well and the proposed location of this infrastructure is identified as '*utility corridors*' on *Exhibit 1*. After construction, an 'as-built' map will be submitted to BLM. This 'as-built' map will show pipeline sizes and lengths, etc. Construction methods utilized will be industry standard, will minimize environmental impacts and will be in compliance with terms and conditions as stipulated by BLM (surface owner).
- C. OTHER INFRASTRUCTURE: If the wells are commercial producers, proposed central metering sites and compressor sites will be submitted with a request for approval.

8. Slopes too steep for machinery may be hand broadcast and raked with twice the specified amount of seed.
9. Fall seeding will be completed after September 15 and prior to ground frost. To be effective, spring seeding will be completed after the frost has left the ground and prior to May 15.
10. The operator will control noxious weeds on the location and along the access road. On BLM surface, this will require an authorized pesticide use permit. All rehabilitation work, including seeding, will be completed as soon as feasible following plugging.
12. BLM will not release the performance bond until the area has been successfully revegetated (evaluation will be made after the second growing season) and has met all other reclamation goals of the surface owner and surface management agency).
13. A Notice of Intent to Abandon will be submitted for abandonment approval, followed by a Subsequent Report of Abandonment once all work has been completed.
14. An above-ground tubular metal dry hole marker will be erected over the drill hole location upon cessation of drilling and/or testing operations. The marker will be inscribed with the operator's name, well number, well location, and federal lease number. Upon request from the surface owner, the casing may be cut-off three (3) feet below reclaimed ground surface (or below plow depth) with a metal plate affixed to the top providing the same well information as stated above. This monument must consist of a piece of pipe and not less than four (4) inches in diameter and ten (10) feet in length, of which four (4) feet shall be above the general ground level and the remainder being imbedded in cement. The top of the pipe must be closed by a welded or screw cap, cement or other means.

D. If The Well is a Producer:

1. Those areas not required for production will be landscaped to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before recontouring pit area. The operator will be responsible for recontouring of any subsidence areas that develop from closing a pit before it is completely dry.
2. Distribute stockpiled topsoil evenly over those areas not required for production and reseed using the seeding method specified above.
3. The operator will control noxious weeds on the location and along the access road. On BLM surface, this will require an authorized pesticide use permit.
4. All permanent above-the-ground structures that will remain longer than six months will be painted desert brown (Munsell standard color No. 10 YR 6/3) or other standard color required by the BLM. The exception being that Wyoming Occupation Health and Safety Act Rules and Regulations are to be complied with where special safety colors are required.
5. Vegetation will be controlled by mowing or cutting on the access road and around the well and production facilities to minimize fire hazard.

13. SURFACE OWNERSHIP:

- A. All of the well locations in the project area are located on surface and mineral estate owned by the BLM.

14. OTHER INFORMATION:

- A. An Environmental Assessment of the Project Area is being submitted. The EA will address all known potential impacts of this project.
- B. A cultural survey of all of the well sites, access and utility corridors within the project area has been completed.
- C. Right-of-way grants necessary across off-lease BLM lands will be applied for from the authorized BLM Office concurrently with submittal of this plan.
- D. Kennedy Oil agrees to comply with all stipulations found in the oil and gas leases covering the wells applied for under this Plan.
- E. Kennedy Oil agrees to consider and, if necessary, mitigate any impacts to current land uses, right-of-ways or improvements near the proposed well sites and access that might be impacted or interfere with drilling or construction operations.

15. ADDITIONAL STIPULATIONS:

- A. Should previously unknown or unanticipated cultural resources be discovered during project implementation, all working the immediate area of said resources will halt. The Field Manager will be notified of the discovery. The discovery situation will then be evaluated and consulted upon as per the terms of the National Preservation Act of 1966, as amended, its implementing regulations, and the Wyoming State Protocol Agreement between the Bureau of Land Management and the Wyoming State Historic Preservation Officer. Should human remains or burial-related objects be discovered the terms of the Native American Graves and Repatriation Act and its implementing regulation may be invoked. Work in the area will not resume until the Field Manager notifies the operator in writing that it is appropriate to do so.
- B. The Operator shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, general land office and Bureau of Land Management cadastral survey corners, reference corners, witness points, U.S. coastal and geodetic benchmarks and triangulation stations, military control monuments and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the incident will be reported, in writing, to the AO and respective installing authority, if known. Where General Land Office or BLM right-of-way monument(s) or reference(s) are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the damaged monument(s) and reference(s), record such survey in the County and send a copy to the AO. If Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbance, the holder shall be responsible for the survey cost.
- C. The Operator/Holder is responsible for the weed control on disturbed areas within the exterior limits of the permit. The control methods must be undertaken in accordance with guidelines established by the BLM, State and local authorities. Prior approval is required and use of pesticides will be limited to those approved by the AO. Prior BLM approval is not required on split estate, however, compliance with EPA regulations and State Law is required.
- D. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended, with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this grant. Additionally, any

release of toxic substances in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required, a copy of which shall be furnished to the AO concurrently.

- E. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste, as defined in ERCLA Act of 1989 or the RCRA Act of 1976, on the right-of-way, unless the release or threatened release is wholly unrelated to the holder's activity on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent or unrelated third parties.

16. LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:

For additional information, if necessary, contact:

Ruth M. Reile, Regulatory Affairs/Land
KENNEDY OIL
700 West Sixth Street
Gillette, WY 82716
Telephone: (307) 682-3107 or 682-8726

Certification:

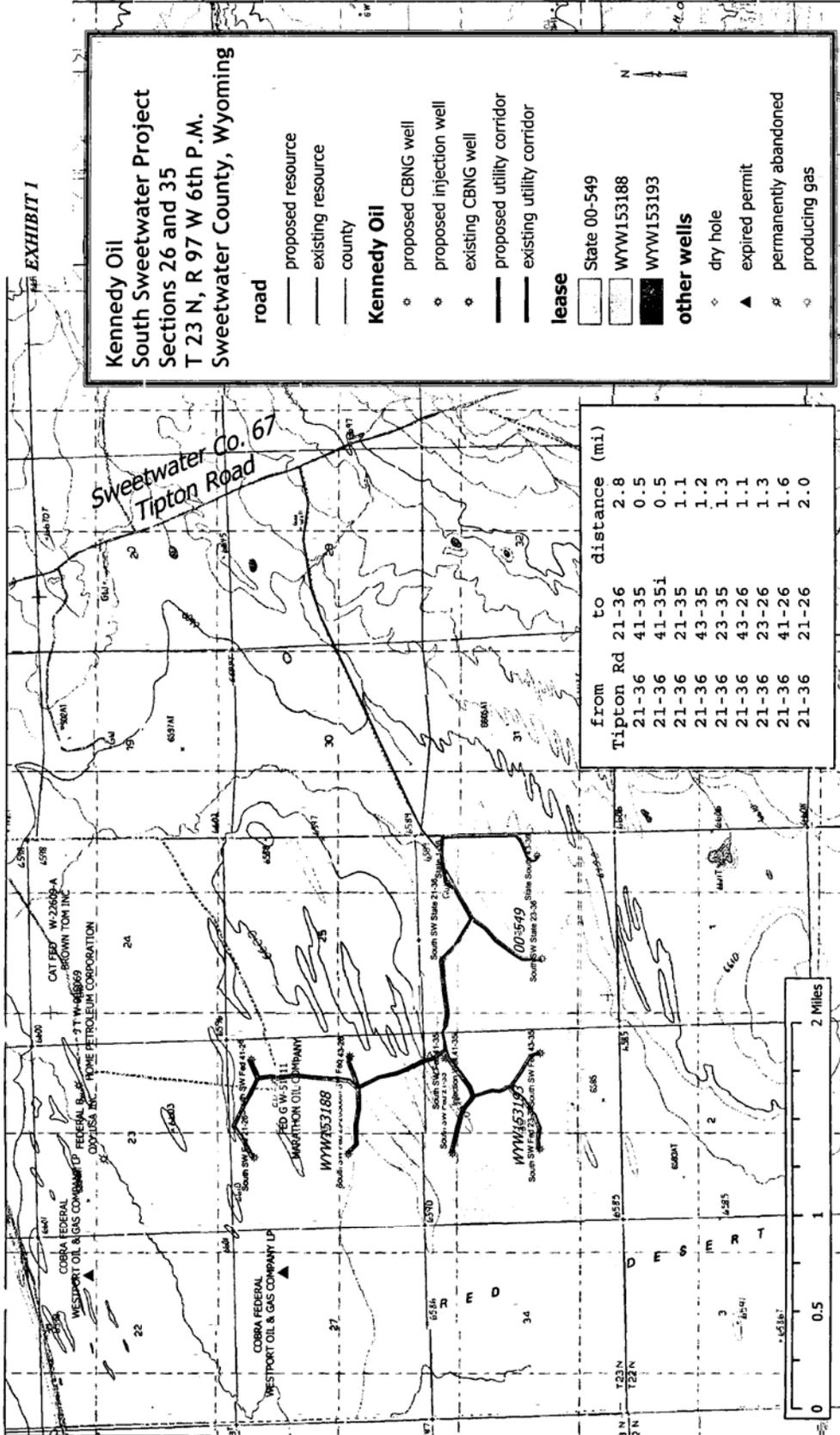
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill sites and access sites; that I am familiar with the conditions which currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by KENNEDY OIL and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

OPERATOR/AGENT

DATE

R 97 W R 96 W

EXHIBIT 1



Kennedy Oil
 South Sweetwater Project
 Sections 26 and 35
 T 23 N, R 97 W 6th P.M.
 Sweetwater County, Wyoming

- proposed resource
 - existing resource
 - county
- Kennedy Oil**
- ⊙ proposed CBNG well
 - ⊙ proposed injection well
 - ⊙ existing CBNG well
 - proposed utility corridor
 - existing utility corridor

- lease**
- State 00-549
 - ▨ WYW153188
 - WYW153193
- other wells**
- ◇ dry hole
 - ▲ expired permit
 - ⊙ permanently abandoned
 - ⊙ producing gas

from	to	distance (mi.)
Tipton Rd 21-36	21-36	2.8
21-36	41-35	0.5
21-36	41-35i	0.5
21-36	21-35	1.1
21-36	43-35	1.2
21-36	23-35	1.3
21-36	43-26	1.1
21-36	23-26	1.3
21-36	41-26	1.6
21-36	21-26	2.0



T 23 N

GEOMETRIC STANDARDS FOR BUREAU ROADS

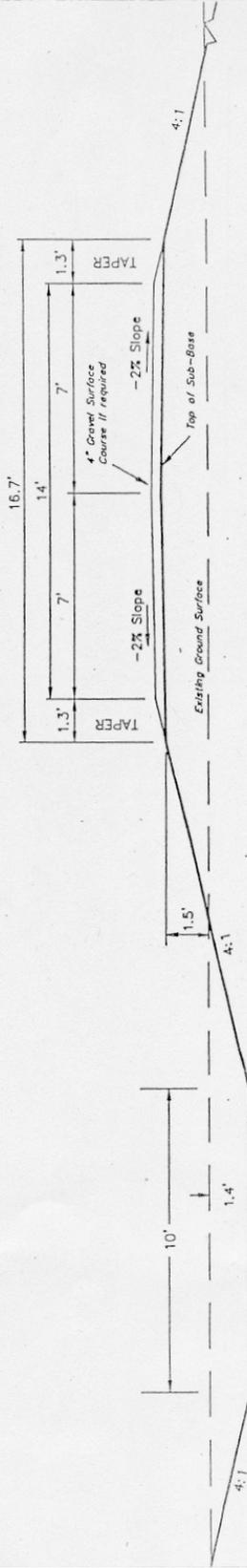
FUNCTIONAL CLASSIFICATION	EST 20 YR. ADT	TERRAIN	DESIGN SPEED		TRAVELWAY WIDTH		MAXIMUM GRADE	
			PREF.	MIN.	PREF.	MIN.	PREF.	MAX.
Resource	Less than 20	LEVEL & ROLLING	30		14		8	10
		Mountainous	15		14		8	16

EXHIBIT "2"

GRAVEL SPECIFICATION:

3" minus pit run gravel (AASHTO M145-49 A-1-a Soil)
 Do not place gravel on road until Inspector/Engineer has approved the sub-grade.
 Place gravel to full widened width on turnouts, curve widening, and intersection flares.

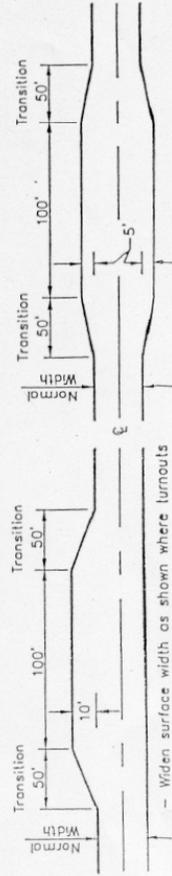
TYPICAL CROSS SECTIONS (for Proposed Access Roads)



FLAT BOTTOM DITCH (BOTH SIDES)

TURNOUTS REQUIRED

SUB-GRADE TO BE COMPACTED TO APPROPRIATE DENSITY AS SPECIFIED BY ENGINEER



Kennedy Oil
 700 West 6th
 Gillette WY 82716



Wyoming Oil and Gas Conservation Commission

- Image will print best in Internet Explorer turn Background Image and Graphics printing on under:
Tools-Internet Options-Advanced-Printing
- Click On Section Number to View Spacing

Range 97

22	23	24
27	26	25
34	35	36

T
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23

EXHIBIT 3

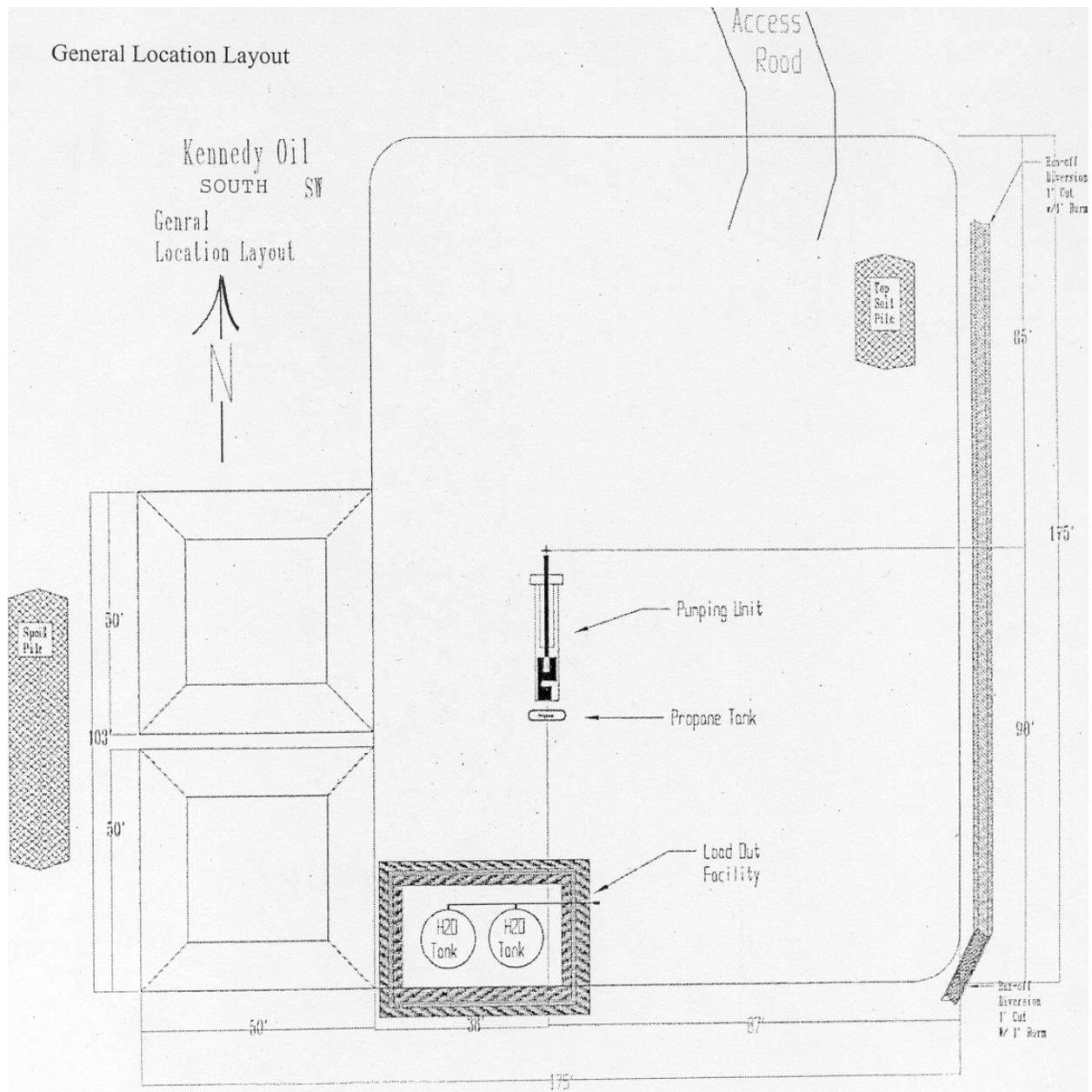
Wyoming
 Wyoming Oil and Gas
 Conservation Commission

Well Class	Permit To Drill	Expired Permit	Producing or Injecting	Shut In	Temporarily Abandoned	Dormant	Notice Of Intent To P&A	Plugged and Abandoned	Spud	Waiting On Approval
Oil	○	⊗	●	○	⊖	⊕	⊖	⊖	☺	⊗
Gas	○	⊗	☼	○	⊖	⊕	⊖	⊖	☺	⊗
Coal Bed	○	⊗	☼	○	⊖	⊕	⊖	⊖	☺	⊗
Injector	○	⊗	⊖	○	⊖	⊕	⊖	⊖	☺	⊗
Disposal	○	⊗	⊖	○	⊖	⊕	⊖	⊖	☺	⊗
Not Designated	○	⊗	⊖	○	⊖	⊕	⊖	⊖	☺	⊗

 Multiple API #'s Present
 Check For Requirements

EXHIBIT 4

General Location Layout



Scale: 1" = 30'

EXHIBIT 6

Arrow Engine Company

A TriMas Company

We are pleased to confirm the observed emission levels for the Arrow VRG 220 and VRG 330 spark ignited engines as follows:

Model	VRG 330TA	VRG 330HC	VRG 330/220
NO _x	10.084	12.077	12.951
CO	1.587	1.314	1.104
CO ₂	396.1	401.2	432.0
NMHC	.022	.053	.050

- Units for all values, grams/HP-hr.
- Values represent emissions at 100% loads.
- All tests based on pipeline quality Natural Gas of 900 Btu/ft³ (LHV).
- Actual readings may vary based on site conditions and fuel composition.

We are pleased to confirm the observed emission levels for the Arrow C-46, C-66, C-96 and C-106 spark ignited engines as follows:

Model	C-46	C-66	C-96	C-106
NO _x	4.102	3.698	2.760	2.299
CO	.368	.642	.482	.903
CO ₂	685.4	629.8	674.0	487.3
NMHC	.008	.001	.005	.001

- Units for all values, grams/HP-hr.
Values represent emissions at 75% loads at maximum RPM.
- All tests based on pipeline quality Natural Gas of 900 Btu/ft³ (LHV).
Actual readings may vary based on site conditions and fuel composition.

**KENNEDY OIL
 MASTER DRILLING PLAN
 BIG RED COAL CBNG
 SWEETWATER COUNTY, WYOMING**

DRILLING PROGNOSIS

THE FOLLOWING INFORMATION WILL BE PROVIDED WITH EACH INDIVIDUAL APPLICATION:

- A. Survey plat, cut & fill plat.
- B. Ground elevation, estimated tops of important geologic markers and estimated depths at which the top and bottom of anticipated water, oil, gas or other mineral bearing formations are expected to be encountered.

Shallow surface sands from the surface to the top of the Fort Union Coals may contain fresh water. Any shallow water zones encountered will be adequately protected and reported. All potentially productive hydrocarbon zones will be cemented off.

1 PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM – EXHIBIT #1A AND #1B)

TYPE: 10” double gate hydraulic with 1 blind ram, 1 pipe ram and; equipped with choke and manifold and 9”-10” casing head. There will be a fill line above uppermost preventer.

PRESSURE RATING: 2000 psi BOP, 2000 psi choke manifold and accumulator and 2000 psi casing head.

TESTING PROCEDURE: Ram preventers and related control equipment (choke manifold, kelly cocks, etc.) Will be pressure tested to 100% of their rated working pressure for a period of 10 minutes. The casing string will be tested to 70% of its internal yield strength.

BOP's will be tested when installed, every 30 days, or whenever any seal is broken, as per **Onshore Order No. 2**. Fill line will be 2”, kill line will be 2”, choke relief line will be 3”. BOP drills and tests will be recorded in the driller's log.

The choke manifold and BOP extension rods with handwheels will be located outside the sub-structure or the hydraulic BOP closing unit will be located at least 25 feet from the well head. Exact locations and configurations will depend upon the particular rig contracted to drill each hole.

The choke line (the line which connects the BOP stack to the choke manifold) will be as straight as possible and turns, if required, will have a targeted T block if the required BOP stack is three thousand pounds or greater. A flare line will be installed after the choke manifold, extending to 125 feet (minimum) from the center of the drill hole to the pit.

2 THE PROPOSED CASING AND CEMENTING PROGRAM (ALL NEW)

A. Casing Program:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft.</u>	<u>Grade</u>	<u>Joint</u>	<u>Depth Set</u>
12 ¼”	8 5/8”	20#	H40	ST&C	*
7 7/8”	5 ½”	15.5#	J55	ST&C/LT&C	TD

**Surface pipe will be set to a maximum depth of 10% of total depth as per requirement of WOGCC for each individual well. This data will be included where applicable to the individual well.*

Casing string(s) will be pressure tested to .22 psi/ft or 1500 psi, whichever is greater.
Minimum design factors for tension, collapse and burst are:

Tension: 1.6
Collapse: 1.125
Burst: 1.0

B. CEMENTING PROGRAM (SEE ATTACHED EXHIBITS #2A, 2B, 2C, 2D & 2E)

Cement Volumes: Cement volumes vary for each individual well. This information will be included where applicable to the individual well.

Surface Pipe: Surface pipe will be cemented back to the surface, with 100% excess, using Class G cement, 3% calcium chloride accelerator, w/additives.

Production Casing: Production casing will be cemented back to surface using lite cement and the appropriate number of sacks of Class G (tail).

In any case, a sufficient amount of cement will be used to ensure that all potentially productive hydrocarbon zones are cemented off. In the event of lost circulation, a bond log will be run.

WOC Time: WOC time is a *minimum* of 12 hours until cement is stabilized.

Centralizers: 3 on bottom 3 jts of surface pipe (1 on each jt.); 3 on bottom of long string; 1 in surface for production casing.

3. MUD PROGRAM (VISUAL MONITORING AND FLOW SENSOR DEVICE):

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-TD	Native/surfactants/LCM*/bentonite	8.5-9.0	45	*

*Drilling mud would consist of fresh water, native clays and bentonite gel. As hole conditions dictate small amounts of polymer additives, potassium chloride salts, surfactants, and loss circulation materials will be added to hole cleaning and hole stabilization.

4. WATER SOURCE

Water for drilling and cementing will be trucked from the Kennedy State 1-36 well located in the NENE, Sec. 36, T23N, R96W. Any ROW's needed from the BLM – Rawlins Field Office will be applied for concurrently with the POD submittal.

5 EVALUATION PROGRAM:

Logs: Dual Induction/Gamma Ray (TD-surface)
Density (optional)

DST's: None anticipated

Cores: None anticipated

Samples: 10' samples to bottom of production casing; 1' samples across coal.
Evaluation program may change at the discretion of the well site supervisor.

6. ABNORMAL CONDITIONS:

- A. None anticipated during drilling and completion
- B. The surface sands and the Fort Union Coal are potential zones of lost circulation. This will be alleviated by the use of lost circulation materials, as needed.
- C. Maximum anticipated bottom hole pressure equals 1700 psi. Maximum anticipated surface pressure equals 0 psi.

No H2S gas is expected to be encountered, based on reports from previous drilling in the area at this depth.

7. DRILLING ACTIVITY:

- A. Anticipated Commencement Date: BLM will be notified of Spud Date, at least 24 hours in advance for each individual well.

Drilling Days: Approximately 10 days.

Completion Days: Approximately 20 days.

- B. Auxiliary Equipment:
 - 1. A kelly cock will be kept in the string at all times.
 - 2. Periodic checks will be made each tour of the mud system (refer to Item #5).
 - 3. A stabbing valve will be kept on the derrick floor to be stabbed into the drill pipe whenever the kelly is not in the string.
 - 4. No bit float will be used.

8. COMPLETION ACTIVITY/STIMULATION

- A. Perforate Big Red Coal – 4 shots per foot.
- B. Frac with proposed frac program – 6000# per foot with 20/40 frac sand.
- C. Tubing – 2 7/8" J55, 6.4#.
- D. The drill site, as approved, will be of sufficient size to accommodate all completion activities.

9. NOTIFICATION

Bureau of Land Management
Rawlins Field Office

Specific contacts and phone numbers will be provided by the Rawlins Field Office as an attachment to the approved permit.

The spud date will be orally reported to the Authorized Officer (AO) TWENTY-FOUR (24) HOURS PRIOR TO SPUDDING.

All wells, whether drilling, producing, suspended or abandoned shall be identified in accordance with 43 CFR 3162.6, which requires the name of the operator, lease number, well number and location of the well. In accordance with *Onshore Oil & Gas Order No. 1*, all wells will be reported on MMS form 3160-6, *Monthly Report of Operations and Production*, starting with the month in which operations commence and continuing each month until the well is physically plugged and abandoned.

All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL-3A will be reported to the Rawlins Field Office. Major events will be reported verbally within twenty-four (24) hours and will be followed with a written report within fifteen (15) days. 'Other than Major Events' will be reported in writing within fifteen (15) days. 'Minor Event' will be reported on the *Monthly Report of Operations and Production* (Form #3160-6).

No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly-drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the Area Petroleum Engineer.

A *Notice of Intent to Abandon* (Form #3160-5) will be filed with the AO within fifteen (15) days following the granting of oral approval to plug and abandon. Upon completion of approval plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently placed on the marker with a plate or cap, or beaded-on with a welding torch: Operator Name, Well Name and Number, Location by Quarter/Quarter, Section, Township, Range and Federal Lease Number.

A *Subsequent Report of Abandonment* (Form #3160-5) will be submitted within thirty (30) days following the actual plugging of the well bore. This report will indicate where plugs were placed and the current status of surface restoration operations. If surface restoration has not been completed at that time, a follow-up report on Form 3160-5 will be filed when all surface restoration work has been completed and the location is considered ready for final inspection.

Pursuant to NTL-4A, lessees and operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of thirty (30) days or the production of fifty (50) MMCF of gas, whichever occurs first. An application must be filed with the AO, and approval received, for any venting/flaring of gas beyond the initial thirty (30) days or otherwise authorized test period.

Not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than ninety (90) days, the operator shall notify the AO by letter or Sundry Notice of the date on which such production has begun or resumed.

The notification shall provide, as a minimum, the following information

- a. Operator name, address, telephone number.
- b. Well name and number.
- c. Well location, i.e. Quarter/Quarter, (applicable Dependent Resurvey Lot Number), Township, Range and Principal Meridian.
- d. Date well was placed into producing status.
- e. The nature of the well's production, i.e. crude oil, casinghead gas, natural gas and entrained liquid hydrocarbons.
- f. The OCS, Federal or Indian lease prefix and number on which the well is located. Otherwise, the non-Federal or non-Indian land category, i.e. state or private.

As per 43 CFR 3162.7-4(d), within sixty (60) days following construction of a new tank battery, a site facility diagram of the battery showing actual conditions and piping must be submitted to the AO. Facility diagrams shall be filed within sixty (60) days after existing facilities are modified.

Pursuant to *Onshore Oil & Gas Order No. 1*, lessees and operators have the responsibility to see that their exploration, development, production and construction operations are conducted in such a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such state and local laws and regulations are applicable to operations on Federal and Indian lands.

TYPICAL 2,000 psi WORKING PRESSURE BOP STACK

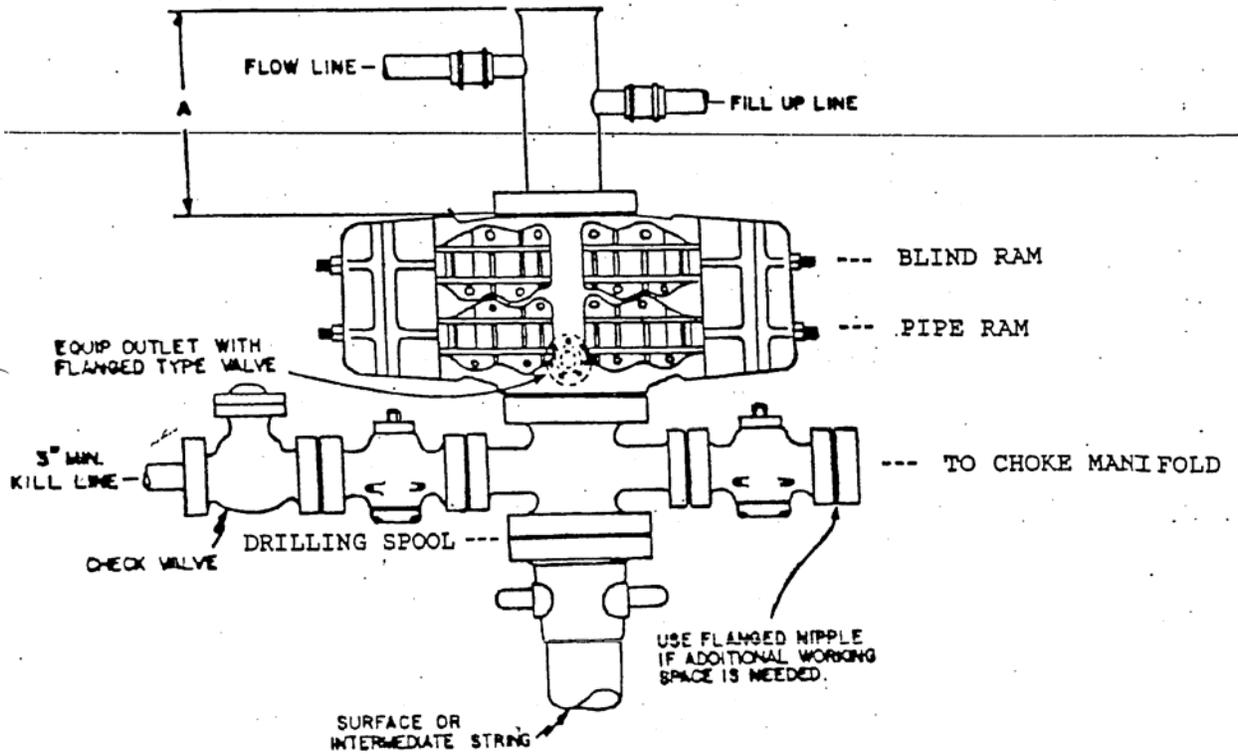


Exhibit #1A

BLOWOUT PREVENTER

9-10 Inch 2000 psi

BOP ACTUATING SYSTEM

- 1) Accumulator capacity will supply 1½ times volume necessary to close all BOP equipment units with a minimum pressure of 203 psi above pre-charge pressure.
- 2) Accumulator back up system, supplied by a secondary power source independent of primary power source, will be provided with sufficient capacity to close all blowout preventers.
- 3) Locking devices will be provided on ram type preventers.
- 4) Primary BOP actuating control will be hydraulic and located either in the dog house or on the rig floor. Back up control will be provided by hand-wheel manual operation of BOP.

CHOKE MANIFOLD

All valves & fittings will be rated at 2,000# working pressure.

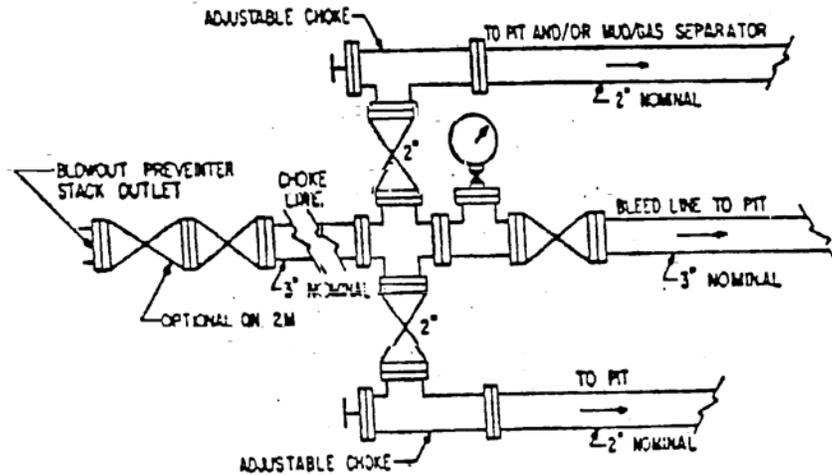


FIG. 3.A.1
TYPICAL CHOKE MANIFOLD ASSEMBLY

M & S OIL WELL CEMENTING CO., INC.

P. O. Box 7166
GILLETTE, WY 82717

PHONE 307-686-1611
FAX 307-687-7911
mscementwy@vcn.com

CEMENTING TECHNICAL DATA SHEET *

<u>API TYPE</u>	<u>SLURRY WEIGHT (LBS/GAL)</u>	<u>WATER REQUIREMENT (GAL/SX)</u>	<u>SLURRY YIELD (CU.FT./SX)</u>	<u>COMPRESSIVE STRENGTH</u>	
				<u>8 HRS</u>	<u>24 HRS</u>
X-TREME LITE	10.8	22	3.73	60	270
LITE	12.8	9.8	1.78	180	640
CLASS G	14.5	7.2	1.60	550	2150
CLASS C (III)	14.5	7.2	1.57	625	2450

*Data pertains to M & S Cementing Custom Blends

Exhibit #2A



Sun CEMENTING OF WYOMING

A Division of Schmid Oilfield Service, Inc.

First Energy
Services Company

LEAD CEMENT	WATER GAL/SK	SLURRY WT. LBS/GAL	SLURRY VOL. CFT/SK	PUMP TIME	COMP. STRENGTH
Extreme-Lite	21	11.2	3.44	7 hrs.	275 PSI/24 hrs.
Class G	5	15.8	1.15	2.45 hrs	2140 PSI/24 hrs.
Lite	9.9	12.7	1.84	4 hrs.	525 PSI/24 hrs.
Type III	6.3	14.8	1.32	2 hrs	840 PSI/12 hrs

If you should have any questions, please do not hesitate to call me at 307-682-5258.

Sincerely,

[Signature]

Bill Brown

24 Union Chapel Road
Gillette, Wyoming 82718
tel: 307-682-4010 fax: 307-686-9147

First Energy

Services Company

March 7, 2003

Kennedy Oil Company
FAX# 682-6060

RE Cement

Compressive Strength

	<u>HOURS</u>	<u>PSI</u>
Extreme Lite	12	80
	24	240
	36	380
Type III	12	840
	24	1230
Class "G"	8	1035
	24	2915

Slurry Properties

	<u>Water</u>	<u>Slurry WT</u>	<u>Slurry VOL</u>
Extreme Lite	21 gal/sack	11.2#/gal	3.39 cu ft/sack
Type III	6.3 gal/sack	14.8#/gal	1.32 cu ft/sack
Class "G"	5.0 gal/sack	15.8#/gal	1.15 cu ft/sack

Please feel free to call should you have any questions.

Sincerely,

Bill Brown
Cementing Manager

BB/km



CEMENTING LABORATORY REPORT
Region Lab #C103400

COMPANY:	General Customer		DATE:	10/23/00			
WELL NAME:	CBM Wells		LOCATION:	Campbell county, Wyoming			
API#:			TYPE JOB:				
DISTRICT:	Gillette, Wyoming						
DEPTH MD(ft):	1000 ft		BHST(°F):	80			
CASING SIZE("):			BHCT(°F):	80			
TUBING SIZE("):			BHSqT(°F):				
TOC(md):			TOL (°F):	Static:		Circ:	
SLURRY DATA							
#1	Type III + 2% SMS, 2% Gypsum						
#2	Type III + 2% CACL2, 2% SMS, 2% Gypsum						
#3	Type III + 2% SMS, 2% Gypsum						
#4	Type III + 2% SMS, 2% Gypsum, 2% Cacl2						
#5	Type III + 2% SMS, 2% Gypsum						
#6	Type III + 2% CACL2, 2% SMS, 2% Gypsum						
SLURRY PROPERTIES							
		#1	#2	#3	#4	#5	#6
Density : ppg		11.50	12.50	13.00	13.50	13.50	14.20
Yield :cu.ft./sk.		2.80	2.19	1.90	1.76	1.72	1.51
Mixing Water: gal/s		17.19	12.57	10.44	9.40	9.02	7.53
Water Type:		Fresh	Fresh	Fresh	Fresh	Fresh	Fresh
Testing Temperature :		80 °F	80 °F	80 °F	80 °F	80 °F	80 °F
Pump Time: hrs:mins.		5:50	4:25	3:14	2:40	2:40	**
Free Water: mis.							
Fluid Loss:ml/30min							
UCA Compressive Strength UCA		80 °F	80 °F	80 °F	80 °F	80 °F	80 °F
	50	psi	4:38	2:47	4:25	2:28	2:50
	500	psi		8:28	8:07	5:56	5:46
	24	hr	420	1108	1625	1825+	2450
Rheologies	RPM	80 °F	80 °F	80 °F	80 °F	80 °F	80 °F
	300	26	40	62	58	89	127
	200	23	36	58	54	84	118
	100	21	32	54	48	78	113
	6	16	27	48	32	49	69
	3	15	21	35	28	44	62
	600	31	50	74	78	105	155
Thixotropic Properties	YES/NO	*Some	Yes	Yes	Yes	Yes	**
		gellation					
Gel Strength : #/100sq.ft.	10 sec.						
	10 min.						
REMARKS :	* #3 slurry has some gellation at 10 minutes of quiecense, but was still pourable without re-mixing. ** Slurry too Viscous at 14.2 ppg.						
COMMENTS : The above data is supplied solely for informational purposes and BJ makes no guarantees or warranties, either express or implied, with respect to the accuracy or use of this data. All product warranties and guarantees shall be governed by the standard contract terms at the time of sale.							

suitable strength. The cool temperature of 57 F was the biggest stumbling block to overcome. Where a system would work at 100 F, it would not at 57 F. Below is the results of tests run so far.

DEPTH	200	FEET
CASING SIZE	5 1/2	INCHES
TUBING SIZE	2 7/8	INCHES
BOTTOM HOLE TEMPERATURE	57	STATIC
	57	CIRC.

SLURRY PROPERTIES

MIXTURE	MIXING %	WATER GAL/SK	WEIGHT PPG	YIELD CU. FT.
1) 'G'+ 10% A-10, 2% CaCl ₂ .	65.51	7.38	14.5	1.52
2) 'G'+ 2% CaCl ₂ , 1% A-2.	44.36	5.0	15.9	1.15
3) 'G'+ 2% CaCl ₂ .	38.0	4.28	16.5	1.05
4) 'G'+ 10% A-10, 2% CaCl ₂ .	57.53	6.54	15.0	1.407
5) 'G'+ 10% A-10, 2% CaCl ₂ .	70.68	7.97	14.2	1.599
6) 'G'+ 20% A-10.	70.30	7.92	14.5	1.649
7) 'G'+ 2% A-2, 0.8% CD-31.	38.06	4.29	16.5	1.051
8) 'G'+ 3% A-2, 0.5% CD-31.	44.00	5.0	15.9	1.15
9) 'G' NEAT	44.00	5.0	15.9	1.141
10) 'C'+ 2% CaCl ₂ , 1% A-2.	65.5	7.38	14.2	1.46
11) 'C'+ 2% CaCl ₂ .	56.0	6.31	14.8	1.32

COMPRESSIVE STRENGTH	12 HOURS	18 HOURS	24 HOURS
1)		450	790
2)		650	975
3)		450	725
4)		350	450
5)		400	700
6)		200	375
7)		212	525
8)		175	400
9)		50	125
10)	50		1750
10) w/90 F F.W.	50		1700
11)			
12)	500		1250
12) w/90 F F.W.	475		1280