Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED
JUN 22 2007
OCD-ARTESIA

1a. Type of work: [X] DRILL [ ] REENTER	5. Lease Serial No. NM 106368
1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. Longshank Halfback Fed Com H
2. Name of Operator DAVID H. ARRINGTON OIL & GAS INC	9. API Well No. 30-005- 63952
3a. Address PO BOX 2071 MIDLAND, TX 79702	3b. Phone No *(include area code)* (432)682-6685
	10. Field and Pool, or Exploratory Wolfcamp Gas
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface 1880' FNL & 400' FEL ROSWELL CONTROLLED WATER BASIN At proposed prod. zone 1880' FNL & 660' FWL	11. Sec., T. R. M. or Blk. and Survey or Area Sec 11, T15S, R24E
14. Distance in miles and direction from nearest town or post office* 10 miles west from Lake Arthur	12. County or Parish Chaves / 13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	400'	16. No. of acres in lease 320	17. Spacing Unit dedicated to this well 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	2700' +/-	19. Proposed Depth 5200' TVD 8735' TMD	20. BLM/BIA Bond No. on file NM 2503
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3622' GL		22. Approximate date work will start* 07/20/2007	23. Estimated duration 15-21 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)* DEBBIE FREEMAN	Date 05/10/2007
Title ENGINEER TECH		
Approved by *(Signature)* /S/ JOHN S. SIMITZ	Name *(Printed/Typed)* /S/ JOHN S. SIMITZ	Date JUN 20 2007
Title Acting Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	APPROVED FOR 2 YEARS

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the Untied States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on page 2)*

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals, and Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 copies
Fee Lease - 3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name	
30-005-	97489	Wildcat Wolfcamp Gas	
[4] Property Code	[5] Property Name		[6] Well Number
36595	LONGSHANK HALFBACK FED COM		1H
[7] OGRID No.	[8] Operator Name		[9] Elevation
5898	DAVID H. ARRINGTON OIL & GAS, INC.		3622'

[10] Surface Location

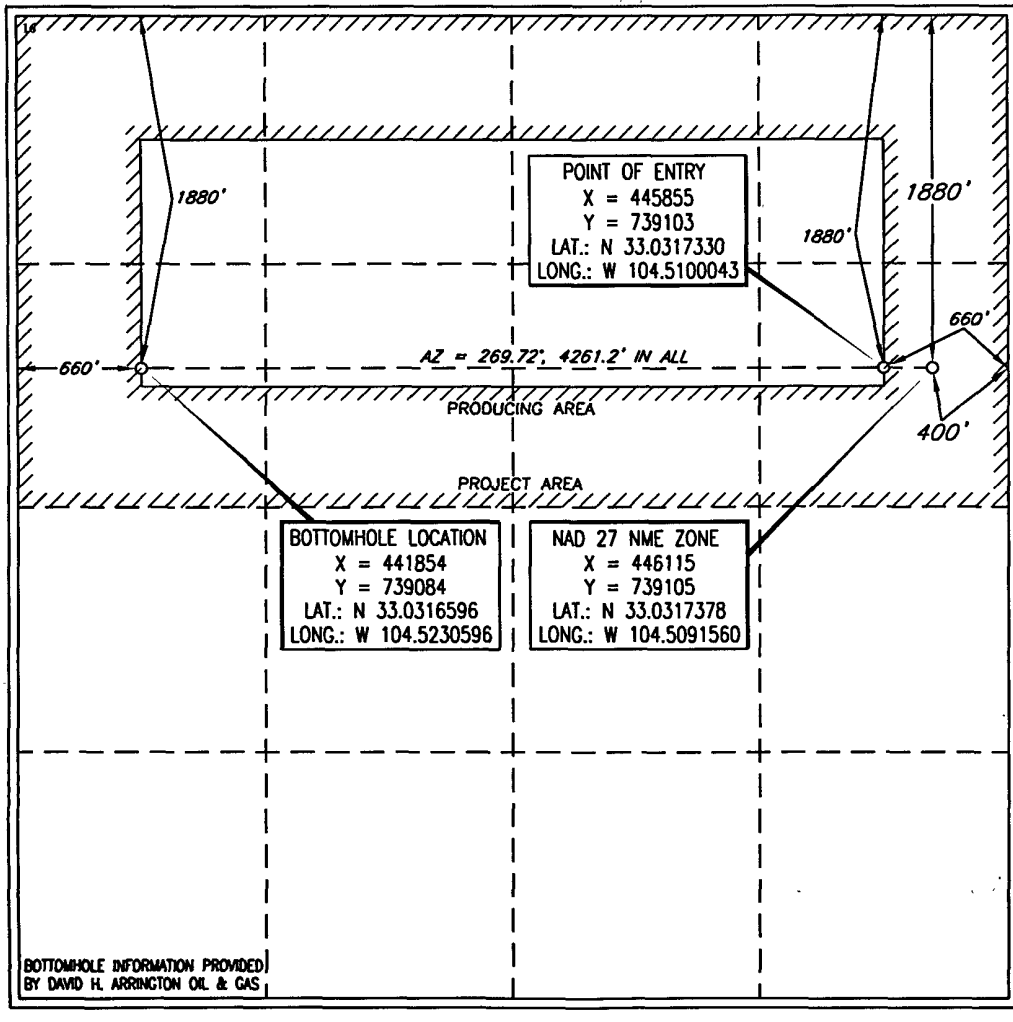
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	11	15 SOUTH	24 EAST, N.M.P.M.		1880'	NORTH	400'	EAST	CHAVES

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	11	15 SOUTH	24 EAST, N.M.P.M.		1880'	NORTH	660'	WEST	CHAVES

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Debbie Freeman 5/8/07
Signature Date

Debbie Freeman
Printed Name

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

DECEMBER 27, 2006
Date of Survey

Signature and Seal of Professional Surveyor

V. L. BEZNER NEW MEXICO 7920 REGISTERED LAND SURVEYOR

Certificate Number
V. L. BEZNER R.P.S. #7920

JOB # 119983 / 125 SW / E.U.O.

Thirteen Point Plan for Surface Use
(Additional data for form 3160-3)

David H. Arrington Oil & Gas, Inc., PO Box 2071, Midland, Texas 79702

Longshank Halfback Fed Com #1H

1880' FNL & 400' FEL of Sec 11, T15S, R24E in Chaves County, NM
Abo/Wolfcamp
NMNM 106668

1. EXISITNG ROADS – A "VICINITY MAP" and a "LOCATION VERIFICATION MAP" by Topographic Land Surveyors are attached which show the location of existing roads and the area topography.

   The directions to the location are as follows:

   From intersection of hwy. 285 & hwy. 82, go north +/- 11.2 miles on hwy. 285, thence west +/- 1.0 mile on Jackson Road, thence north 0.2 miles, thence northwest 0.7 miles, thence north 1.6 miles to a point +/- 300' east of the location.

2. PLANNED ACCESS ROAD – Approximately 5000' of new N-S access road will be built from the Girdle Bug Bobo Fed Com #1H existing location road as per the Topographic Land Surveyors map of April 27, 2007.

3. LOCATION OF EXISTING WELLS – Permitted well approximately 2700' +/- south of location in Sec 11.

4. LOCATION OF EXISTING OR PROPOSED FACILITIES – New facilities will be located just SW of the surface location.

5. LOCATION AND TYPE OF WATER SUPPLY – All water (fresh or otherwise) needed for the drilling and completion of this well will be purchased from a commercial source and trucked to the location via the existing and proposed access roads. No water source wells will be drilled, and no surface water will be utilized.

6. SOURCE OF CONSTRUCTION MATERIALS - Construction material (caliche) required for the preparation of the drill site is available on site or from a local source. It is not anticipated that a significant amount of material will be required as the terrain is relatively flat. Transportation will be over the existing roads and proposed roads.

7. METHODS FOR HANDLING WASTE DISPOSAL –

   a. Drill cuttings will be disposed into drilling pits after fluids have evaporated.

b. The drilling pits will be lines with a 20 mil biodegradable plastic liner, and buried as per regulatory requirements.
c. Receptacles for solid wastes (paper, plastic, etc.) will be provided and equipped to prevent scattering by wind, animals, etc. This waste will be hauled to an approved landfill site. All drilling line, oil filters, etc. will be hauled away by the Drilling Contractor.
d. Any other waste generated by the drilling, completion, testing of this well will be removed from the site within 30 days of the completion of drilling or testing operations.
e. A Porta-John will be provided for the crews. This will be properly maintained during the drilling operations and removed upon completion of the well.

8. ANCILLARY FACILITIES – The drilling, completion, and/or testing of this well will require no ancillary facilities.

9. WELLSITE LAYOUT – Attached is a plat showing the anticipated orientation of rig and the pad. The drill site area has been surveyed and flagged. Material moved to create the drilling pits will be utilized in the dike around the pits so as to facilitate restoration of the area when operations are completed.

10. PLANS FOR SURFACE RESTORATION - Reclamation of the surface location will be in accordance with the requirements set forth by the BLM. As stated earlier, all waste generated by this operation will be disposed of in an approved manner, and the site restored as closely as possible to its pre-operation appearance. Due to the topography of the area no problems are anticipated in achieving this status and no erosion or other detrimental effects are expected as a result of this operation.

11. OTHER INFORMATION – The surface ownership of the drill site and the access routes are under the control/ownership of:
Coleman F. Jackson
72 W. Jackson Rd.
Lake Arthur, NM 88253
505-365-2342

The site has been archaeologically surveyed by a registered archaeological surveyor in April 2007 and submitted to the BLM, Carlsbad, NM.

12. OPERATORS REPRESENTATIVE - David H. Arrington Oil & Gas, Inc. is covered by BLM Bond No. 104312789. David H. Arrington Oil & Gas, Inc. is represented by: Mark Ellerbe, Company Operation & Drilling Engineer 432-559-1216.

13. OPERATORS CERTIFICAION

I hereby certify that I, Mark Ellerbe – Operations Engineer, have inspected the proposed drill site and access route and that I am familiar with the conditions that currently exist; that the statements made in the APD package are to the best of my knowledge true and correct; and that the work associated with operations herein will be performed by David H. Arrington Oil & Gas, Inc. and it's contractors and subcontractors in conformity with the terms and conditions of this APD package. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application with bond coverage being provided under a BLM bond.

This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Name and title: Mark Ellerbe, Operations/Drilling Engineer for David H. Arrington Oil & Gas, Inc.

Signature: Mark Ellerbe

Date: 5/10/07

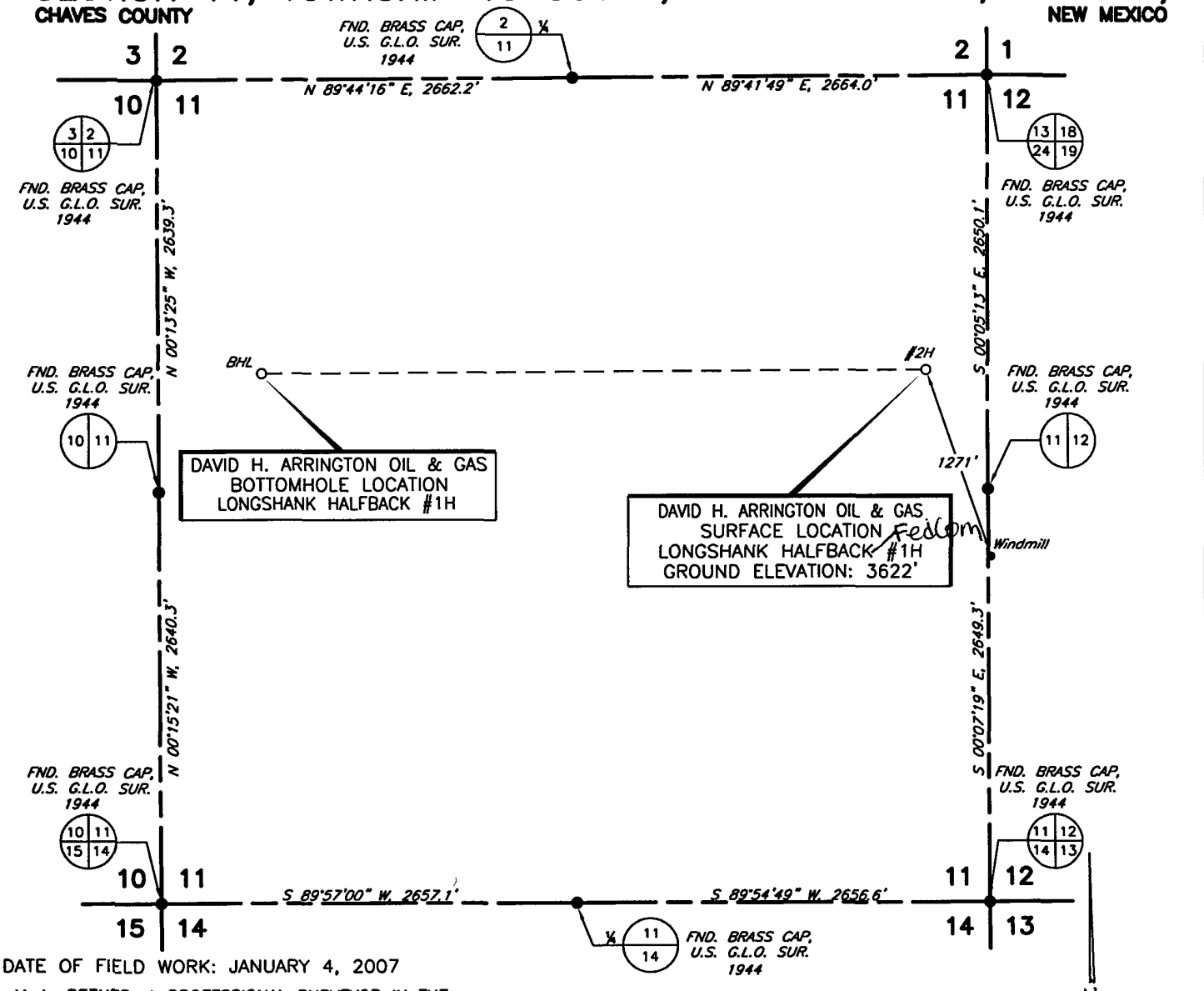
.....

.....

APD, Nine Point & Thirteen Point Drilling Plans prepared & submitted to the Bureau of Land Management by Debbie Freeman, Engineer Technician for David H. Arrington Oil & Gas, Inc. P.O. Box 2071, Midland, Texas 79702

SECTION 11, TOWNSHIP 15 SOUTH, RANGE 24 EAST, N.M.P.M.,

CHAVES COUNTY NEW MEXICO



DATE OF FIELD WORK: JANUARY 4, 2007

I, V. L. BEZNER, A PROFESSIONAL SURVEYOR IN THE STATE OF NEW MEXICO AND AUTHORIZED AGENT OF TOPOGRAPHIC LAND SURVEYORS, HEREBY CERTIFY THIS PLAT TO BE A TRUE REPRESENTATION OF A SURVEY PERFORMED IN THE FIELD UNDER MY SUPERVISION, THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS PLAT AND FIELD SURVEY UPON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO. (RULE 500.6 EASEMENT SURVEYING)

V. L. BEZNER, P.S. NO. 7920

V. LYNN BEZNER NEW MEXICO 7920 LICENSED LAND SURVEYOR

N

0 1000

1" = 1000'

BEARINGS AND COORDINATES BASED ON NEW MEXICO STATE PLANE GRID – EAST ZONE, NAD 27

NO.	REVISION	DATE	BY

SURVEYED BY:	A.M.
DRAWN BY:	E.U.O.
APPROVED BY:	V.L.B.

DAVID H. ARRINGTON OIL & GAS, INC.

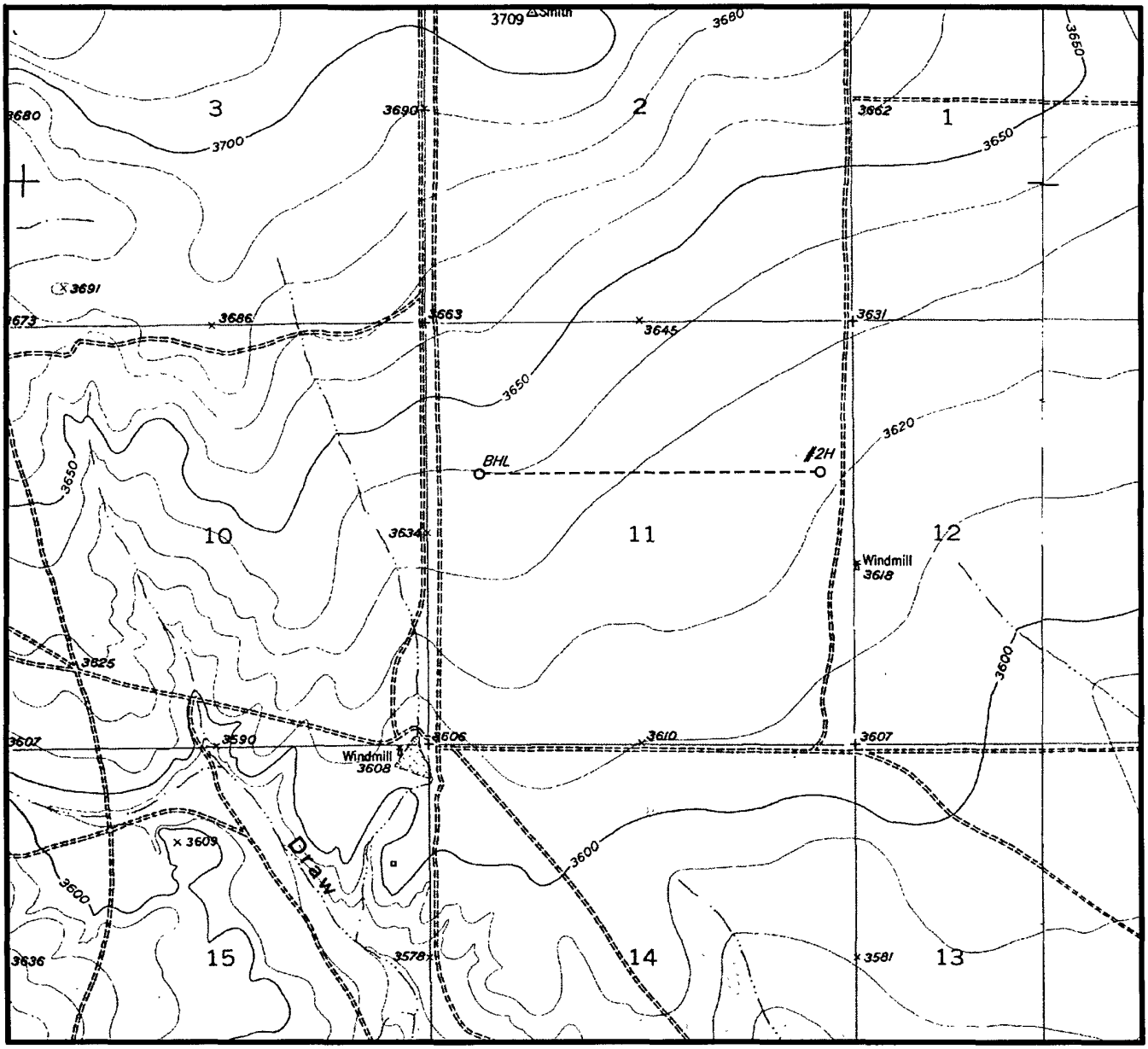
SURVEYING AND MAPPING BY

TOPOGRAPHIC LAND SURVEYORS

MIDLAND, TEXAS

SCALE:	1" = 1000'
DATE:	JANUARY 4, 2007
JOB NO.:	119983-2
QUAD NO.:	125 SW
SHEET :	1 OF 1

LOCATION & ELEVATION VERIFICATION MAP



SCALE : 1" = 2000'

CONTOUR INTERVAL 10'

SECTION 11 TWP 15-S RGE 24-E

SURVEY NEW MEXICO PRINCIPAL MERIDIAN

COUNTY CHAVES STATE NM

DESCRIPTION 1880' FNL & 400' FEL

ELEVATION 3622'

OPERATOR **DAVID H. ARRINGTON OIL & GAS**

LEASE LONGSHANK HALFBACK Fedcom #1H

U.S.G.S. TOPOGRAPHIC MAP

HAGERMAN SW, NEW MEXICO

SCALED LAT. LAT.: N 33.0317378

LONG. LONG.: W 104.5091560

-N-

TOPOGRAPHIC LAND SURVEYORS

Surveying & Mapping for the Oil & Gas Industry

2903 N. BIG SPRING
MIDLAND, TX. 79705
(800) 767-1653

David H. Arrington Oil & Gas Inc.
Longshank Halfback Fed Com 1H
SHL - 1880' FNL & 400' FEL
POE - 1880' FNL & 687' FEL
BHL - 1880' FNL & 660' FWL
S11, T15S, R24E
Chaves County, NM

Drilling Plan

1. Ground elevation above sea level: 3622'

2. Proposed drilling depth: 8735' MD

3. Estimated tops of geological markers:

Red Beds	100'
San Andres	400'
Glorietta	1690'
Tubb	3010'
Abo Shale	3700'
Abo Carbonate	4000'
Wolfcamp	4625'

4. Possible mineral bearing formations:

Abo/Wolfcamp Gas/Oil

5. Casing Program

Hole size	Interval	OD of Casing	Weight	Grade	Thread	TOC
12-1/4"	40' - 1100'	8-5/8"	32#	J55	LTC	Surf
7-7/8"	1100' - 8735'	5-1/2"	17#	I80	LTC	Surf

Drill 7-7/8" vertical hole to ~4255' and begin 15.0 BUR to 4759'. Change out assembly for a BUR of 6.0 and land curve @ 4999' MD (4655' TVD). Drill ahead to a total measured depth of ~ 8735'. Run 5-1/2" production string to TD and cement to surface.

6. Cementing and Setting Depth

String	Depth	Sks		Slurry
8-5/8" Surface	1100'	410	Lead:	Light C (65:35:6) w/ 5 pps gilsonite, 3% salt & 2% $CaCl_2$ (12.4 / 2.06)
		200	Tail:	C w/ 2% $CaCl_2$ (14.8 / 1.34)

If necessary, will run a temperature survey and 1" to surface with C w/ 2% $CaCl_2$.

5-1/2" Production	8735'	560	Lead:	Interfill C w/ 1/8# pps Poly-E-Flake (11.9 / 2.45)
		380	Tail:	Howco Acid Soluble Cement w/ 10# silicalite 50/50 blend, 0.5% Halad 344, 0.2% HR-601 & 0.25 pps D-Air 3000 (14.8 / 2.68)

Both casing strings will be cemented to surface.

7. Pressure Control Equipment: After setting 8-5/8" casing and installing 3000 psi casing head, NU 13-5/8" 5000 psi double ram BOP and 3000 psi annular BOP, and test with clear fluid to 3000 psi using 3rd party testers.

8. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
40' - 1100'	8.5 - 8.6	32 – 38	NC	Fresh water gel/lime slurry. Add paper for seepage. If losses occur, utilize 15-25 lb/bbl LCM. If necessary, spot LCM pill for losses. If not regained, dry drill to depth.
1100' - 8735'	8.4 - 9.3	28 -38	NC-12	Fresh water-cut brine. Drill out w/ cut brine using paper and high viscosity sweeps for seepage and hole cleaning. At ~ 3,500' mud up utilizing starch/PAC system. Add XCD polymer for viscosity and white starch for fluid loss control. Sweep as necessary for hole cleaning.

Proposed Drilling Plan:

Drill 12-1/4" surface hole to 1100'. Run 8-5/8" and cement to surface.

Drill 7-7/8" vertical hole to ~4255' and begin 15.0 BUR to 4759'. Change out assembly for a BUR of 6.0 and land curve @ 4999' MD (4655' TVD). Drill ahead to a total measured depth of ~ 8735'. Run 5-1/2" production string to TD and cement to surface.

THE DIRECTIONAL DRILLING COMPANY

Job Number: []
Company: David H. Arrington Oil & Gas
Lease/Well: Longshank Halfback Fed Com #1H
Location: Chaves County
Rig Name: []
RKB: []
G.L. or M.S.L.: []

State/Country: New Mexico
Declination: []
Grid: []
File name: C:\DOCUME~1\RICKMA~1\MYDOCU~1\PROPOS~1\AR
Date/Time: 09-May-07 / 07:11
Curve Name: Preliminary Plan

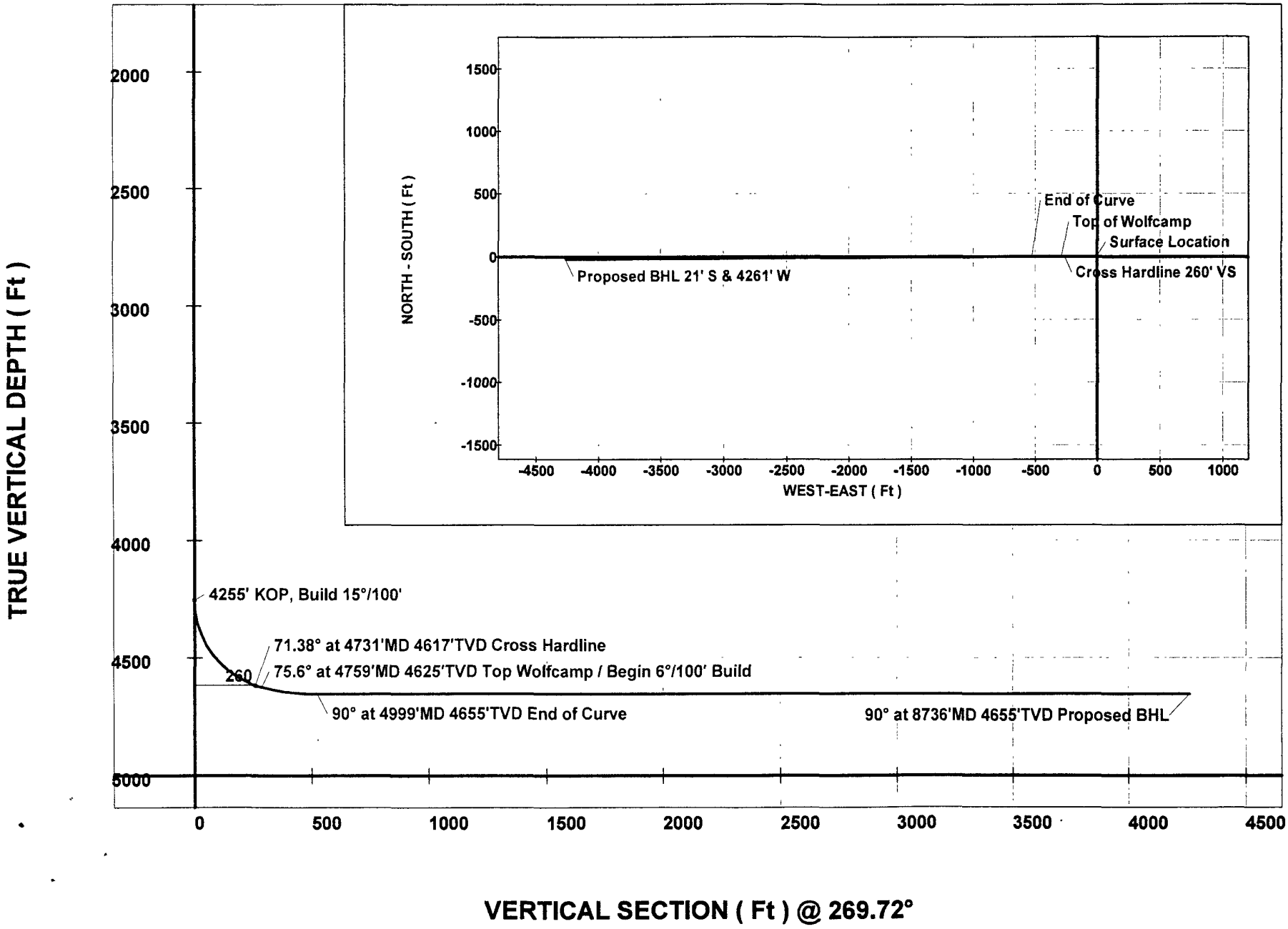
The Directional Drilling Company

WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 269.72
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
KOP, Build 15°/100'									
4255.00	.00	269.72	4255.00	.00	.00	.00	.00	.00	.00
4305.00	7.50	269.72	4304.86	3.27	-.02	-3.27	3.27	269.72	15.00
4355.00	15.00	269.72	4353.86	13.01	-.06	-13.01	13.01	269.72	15.00
4405.00	22.50	269.72	4401.17	29.07	-.14	-29.07	29.07	269.72	15.00
4455.00	30.00	269.72	4445.99	51.17	-.25	-51.17	51.17	269.72	15.00
4505.00	37.50	269.72	4487.53	78.93	-.39	-78.93	78.93	269.72	15.00
4555.00	45.00	269.72	4525.10	111.87	-.55	-111.87	111.87	269.72	15.00
4605.00	52.50	269.72	4558.05	149.43	-.73	-149.43	149.43	269.72	15.00
4655.00	60.00	269.72	4585.81	190.97	-.93	-190.97	190.97	269.72	15.00
4705.00	67.49	269.72	4607.91	235.78	-1.15	-235.78	235.78	269.72	15.00
Cross Hardline									
4730.87	71.38	269.72	4617.00	260.00	-1.27	-260.00	260.00	269.72	15.00
4755.00	74.99	269.72	4623.97	283.10	-1.38	-283.09	283.10	269.72	15.00
Top Wolfcamp / Begin 6°/100' Build									
4759.04	75.60	269.72	4625.00	287.00	-1.40	-287.00	287.00	269.72	15.00
4809.04	78.60	269.72	4636.16	335.73	-1.64	-335.73	335.73	269.72	6.00
4859.04	81.60	269.72	4644.76	384.98	-1.88	-384.98	384.98	269.72	6.00
4909.04	84.60	269.72	4650.76	434.62	-2.12	-434.61	434.62	269.72	6.00
4959.04	87.60	269.72	4654.16	484.49	-2.37	-484.49	484.49	269.72	6.00
End of Curve									
4999.04	90.00	269.72	4655.00	524.48	-2.56	-524.48	524.48	269.72	6.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
5199.04	90.00	269.72	4655.00	724.48	-3.54	-724.47	724.48	269.72	.00
5399.04	90.00	269.72	4655.00	924.48	-4.52	-924.47	924.48	269.72	.00
5599.04	90.00	269.72	4655.00	1124.48	-5.50	-1124.47	1124.48	269.72	.00
5799.04	90.00	269.72	4655.00	1324.48	-6.47	-1324.47	1324.48	269.72	.00
5999.04	90.00	269.72	4655.00	1524.48	-7.45	-1524.47	1524.48	269.72	.00
6199.04	90.00	269.72	4655.00	1724.48	-8.43	-1724.46	1724.48	269.72	.00
6399.04	90.00	269.72	4655.00	1924.48	-9.40	-1924.46	1924.48	269.72	.00
6599.04	90.00	269.72	4655.00	2124.48	-10.38	-2124.46	2124.48	269.72	.00
6799.04	90.00	269.72	4655.00	2324.48	-11.36	-2324.46	2324.48	269.72	.00
6999.04	90.00	269.72	4655.00	2524.48	-12.34	-2524.45	2524.48	269.72	.00
7199.04	90.00	269.72	4655.00	2724.48	-13.31	-2724.45	2724.48	269.72	.00
7399.04	90.00	269.72	4655.00	2924.48	-14.29	-2924.45	2924.48	269.72	.00
7599.04	90.00	269.72	4655.00	3124.48	-15.27	-3124.45	3124.48	269.72	.00
7799.04	90.00	269.72	4655.00	3324.48	-16.25	-3324.44	3324.48	269.72	.00
7999.04	90.00	269.72	4655.00	3524.48	-17.22	-3524.44	3524.48	269.72	.00
8199.04	90.00	269.72	4655.00	3724.48	-18.20	-3724.44	3724.48	269.72	.00
8399.04	90.00	269.72	4655.00	3924.48	-19.18	-3924.44	3924.48	269.72	.00
8599.04	90.00	269.72	4655.00	4124.48	-20.16	-4124.43	4124.48	269.72	.00
Proposed BHL									
8735.76	90.00	269.72	4655.00	4261.20	-20.82	-4261.15	4261.20	269.72	.00

Company: David H. Arrington Oil & Gas
Lease/Well: Longshank Halfback Fed Com #1H
Location: Chaves County
State/Country: New Mexico



Longshank Halfback Fed Com 1H
Cottonwood Creek Field
Chaves County, New Mexico

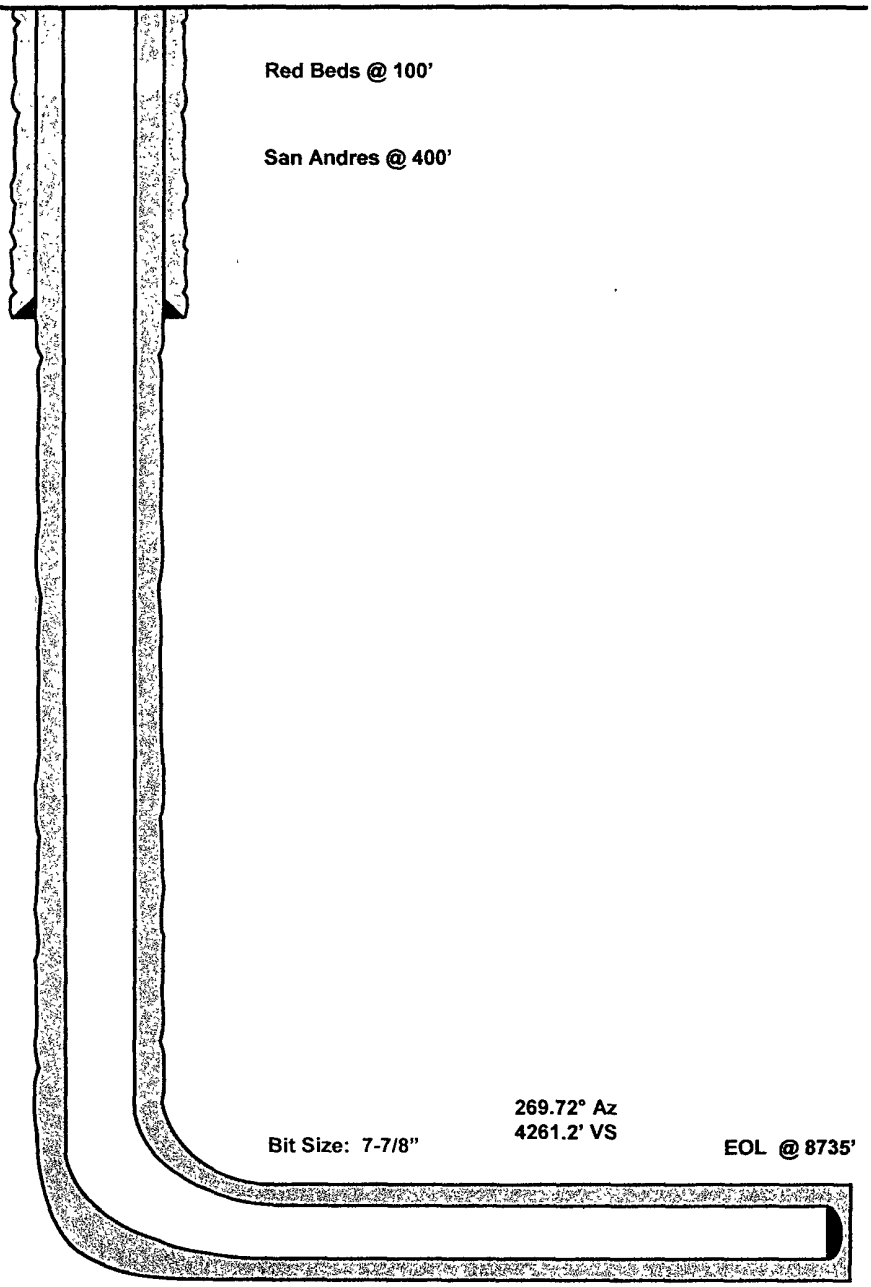
Surface
1880' FNL
400' FEL
S-11
T15S, R24E

Lateral Terminus
1880' FNL
660' FWL

Proposed Wellbore

API: 30-005-

KB: 3641'
GL: 3622'



Red Beds @ 100'

Bit Size: 12-1/4"

San Andres @ 400'

8-5/8" 32# J55 LTC @ 1100'
w/ 410 sx Light C (65:35:6) w/ 5 pps gilsonite, 3% salt & 2% CaCl2 (12.4 / 2.06) and
200 sx C w/ 2% CaCl2 (14.8 / 1.34)
Assumed 100% WO gauge hole + 100 sx Lead

Glorietta @ 1690'

Tubb @ 3010'

Bit Size: 7-7/8"

Abo Shale @ 3700'

Abo Carb @ 4000'

KOP: 4255'
15.0° BUR to 4759' MD / 4625' TVD
6.0° BUR to 4999' MD / 4655' TVD

269.72° Az
4261.2' VS

Bit Size: 7-7/8"

EOL @ 8735'

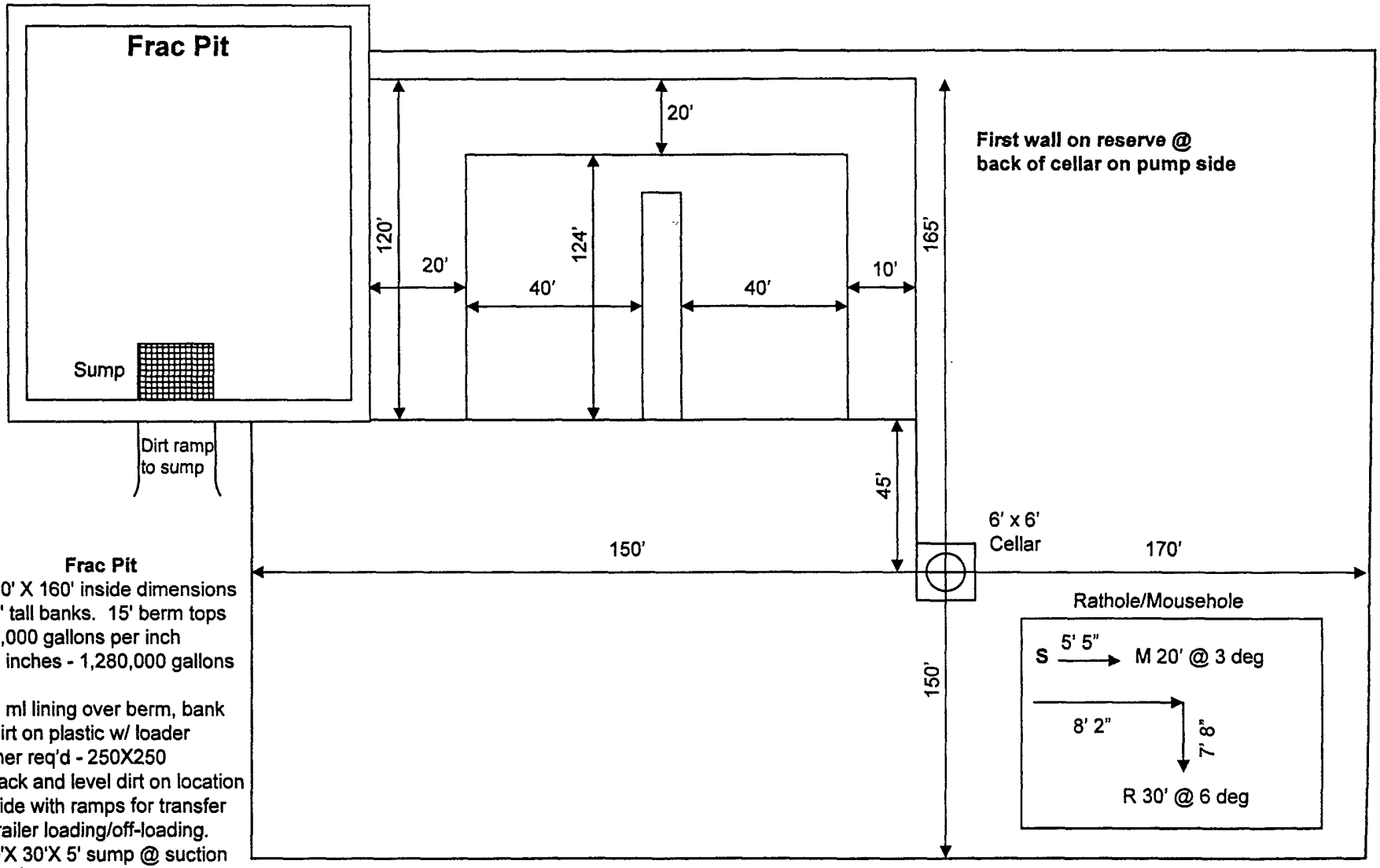
Wolfcamp @ 4625'
Land @ 4655' TVD

5-1/2" 17# I80 LTC @ 8735'
w/ 560 sx Interfill C w/ 1/8# pps Poly-E-Flake (11.9 / 2.45) and
380 sx Howco Acid Soluble Cement w/ 10# silicalite 50/50 blend, 0.5% Halad 344, 0.2% HR-601 & 0.25 pps D-Air 3000 (14.8 / 2.68)
Cement Circulated (Assumed 8.75" AHS + 100 sx lead)

TD: 8735'

MEE: 05/09/07

Patterson Rig 624 Location Layout w/ Frac Pit

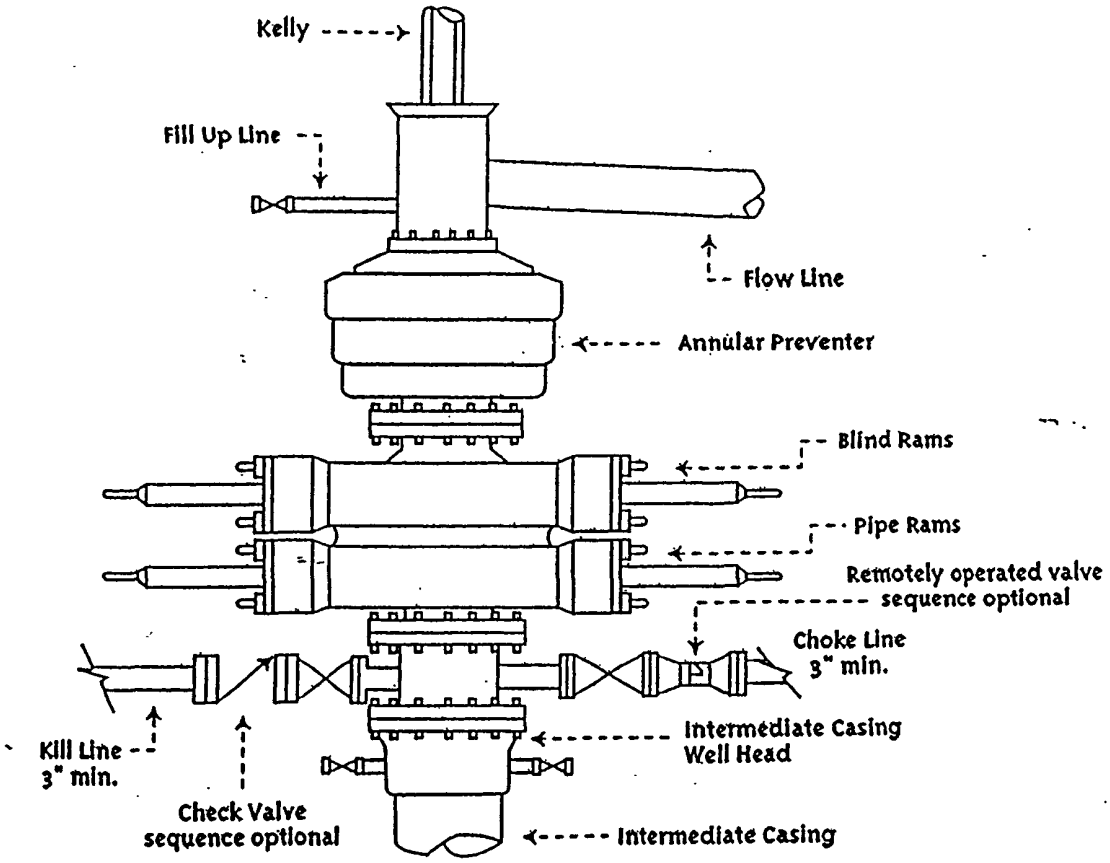


Frac Pit
160' X 160' inside dimensions
10' tall banks. 15' berm tops
16,000 gallons per inch
80 inches - 1,280,000 gallons

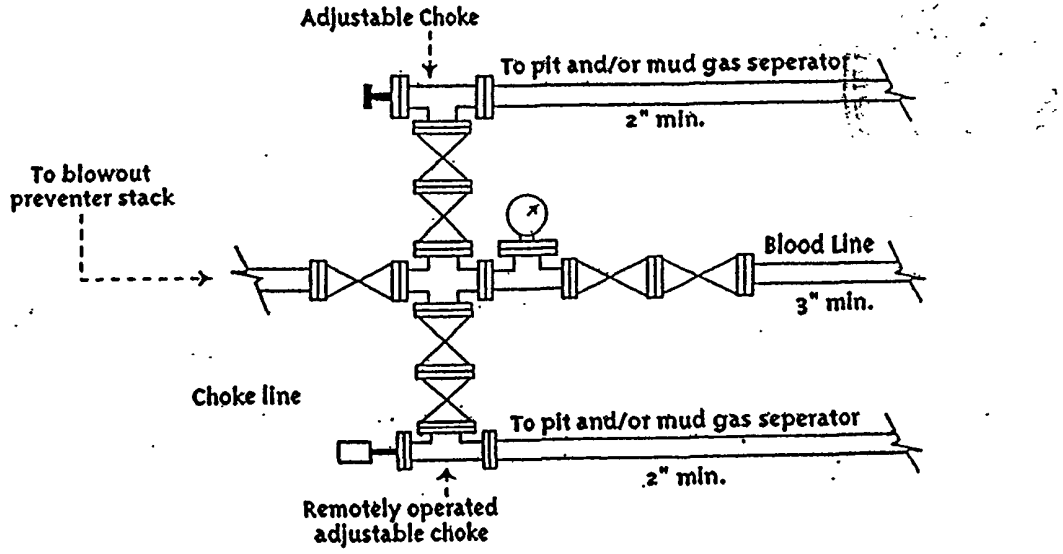
20 ml lining over berm, bank dirt on plastic w/ loader
Liner req'd - 250X250
Stack and level dirt on location side with ramps for transfer trailer loading/off-loading.
30'X 30'X 5' sump @ suction

David H. Arrington Oil & Gas, Inc.

Typical 5,000 psi Pressure System
Schematic
Annular Double Ram Preventer Stack



Typical 3,000 psi choke manifold assembly with at least these minimum features



May 10, 2007

Bureau of Land Management
2909 W. Second Street
Roswell, NM 88201-2019

Oil Conservation Division
Attn: Mr. Bryan Arrant
1301 Grand Ave.
Artesia, NM 88210

RE: David H. Arrington Oil & Gas, Inc., **Longshank Halfback Fed Com #1H**; Cottonwood Creek; Wolfcamp, Sec 11, T15S, R24E, Chaves County, NM.

It is not anticipated that we will encounter any H2S during the drilling or completion of the above referenced well.

We are respectfully requesting an exemption from H2S requirements as per NMOCD Rule 118. The anticipated TVD is 5200' and TMD is 8735' for this proposed horizontal well. In the event the BLM determines a contingency plan is needed, please see the attached DHAO&G plan.

Thank you,

Debbie Freeman
David H. Arrington Oil & Gas
PO Box 2071
Midland, TX 79702
432-682-6685 ext 357

Hydrogen Sulfide Drilling Operations Plan

for

David H. Arrington Oil & Gas, Inc.'s

Longshank Halfback
Bobo Fed Com #11H

ONE - Hydrogen Sulfide Training:

All personnel, whether regularly assigned, contracted or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- The hazards and characteristics of hydrogen sulfide (H2S);
- The proper use and maintenance of personal protective equipment and life support systems;
- The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds; and,
- The proper techniques of first aid and rescue procedures.

In addition, the supervisory personnel will be trained in the following areas;

- The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements;
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H2S Drilling Operations Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500') and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

TWO - H2S Safety Equipment and Systems:

NOTE: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or, three days prior to penetration of the first zone containing, or reasonably expected to contain, H2S.

1. Well Control Equipment:

- Flare line with flare igniter;
- Choke manifold with one remote hydraulic choke installed;
- Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit;
- Auxiliary equipment to include an Annular Preventer.

2. **Protective equipment for essential personnel:**

- The designated safety expert will provide 5-minute escape units located in the doghouse, and 30-minute air units at briefing areas.

3. **H2S detection and monitoring equipment;**

- Three portable H2S monitors will be positioned on location for the best coverage and response. These units have warning lights and audible sirens when triggered by H2S levels > 20 PPM.
- One portable SO2 monitor will be positioned near flare line during H2S flaring operations.

4. **Visual warning systems:**

- Wind direction indicators will be placed in accordance with the directives issued by the designated H2S expert.
- Caution/Danger signs shall be posted on roads providing direct access to the location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be legible from the immediate location.

5. **Mud Program:**

- The mud program will minimize the volume of H2S circulated to the surface. Proper mud weight safe drilling practices, and, if necessary, the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

- All drill strings, casing, tubing, wellhead, blowout preventers, drilling spools kill lines, choke manifold and line valves shall be suitable for H2S service.
- All elastomers used for packing and seals shall be H2S trimmed.

7. **Communications:**

- Radio and telephone communications will be available in company vehicles and rig doghouse.

8. **Well Testing:**

- Drill stem testing will be performed with a minimum number of personnel necessary to safely and adequately conduct the test. The drill stem testing of any known formation that contains H2S will be conducted during daylight hours.

III. WELL SUBSURFACE REQUIREMENTS:

A. GENERAL DRILLING REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second Street, Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties in sufficient time for a representative to witness:

A. Spudding B. Cementing casing: 8 ⅝ inch; 5 ½ inch; C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this wellbore.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

6. A communitization Agreement shall be approved by this office prior to any sales from this well.

B, CASING:

1. The 8 ⅝ inch shall be set at **1100 Feet** with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 5 ½ inch Intermediate casing is to **circulate to surface .**

C. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8 ⅝ inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2 M psi.**

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

-The test shall be done by an independent service company
-The results of the test shall be reported to the appropriate BLM office.
-Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
-Use of drilling mud for testing is not permitted since it can mask small leaks.
-Testing must be done in safe workman-like manner. Hard line connections shall be required.
-Both low pressure and high pressure testing of BOPE is required.

IV. ON LEASE - WELL REQUIREMENTS:

A. The holder shall post signs identifying the location permitted herein with the requirements contained in Onshore Oil and Gas Order #1 and 43 CFR 3162.6.

B. The following data is required on the well sign that shall be posted in a conspicuous place on the well pad. **The communitization agreement number shall be posted on the well sign.** The sign shall be kept up with current identification and shall be legible for as long as the well is in existence:

Operator Name: David H. Arrington Oil & Gas, Inc.
Well Name & No.: Longshank Halfback Federal Com. #1H
Lease No.: NM-106668
Footage: SL; 1880' FNL & 400' FEL, BHL; 1880' FNL & 660' FWL
Location: Section 11, T. 15 S., R. 24 E.

C. UPON ABANDONMENT OF THE WELL, THE SAME INFORMATION SHALL BE INSCRIBED ON THE DRY HOLE MARKER WITH A BEADED WELD.

D. The approval of the APD does not in any way imply or grant approval of any on-lease, off-lease, or off-unit action(s). It is the responsibility of the holder to obtain other approval(s) such as rights-of-way from the Roswell Field Office or other agencies, including private surface landowner(s).

E. All vehicles, including caterpillar track-type tractors, motor graders, off-highway trucks and any other type of motorized equipment that is used in the construction of the access road and well pad shall be confined to the area(s) herein approved. The drilling rig that is used to drill the well shall also be confined to the approved area(s).

F. **Containment Structure Requirement:**

1. A containment structure or earthen dike shall be constructed and maintained around all storage facilities/batteries. The containment structure or earthen dike shall surround the storage facilities/batteries.

2. The containment structure or earthen dike shall be constructed two (2) feet high around the facilities/batteries (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).

3. The perimeter of the containment structure or earthen dike can be constructed substantial larger for greater holding capacity of the contents of the largest tank.

4. The containment structure or earthen dike shall be constructed so that in case of a spill the structure can contain the entire contents of the largest tank, plus 24 hour production, within the containment structure or earthen dike, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

G. **Painting Requirement:**

All above-ground structures (e.g.: meter houses, tanks, above ground pipelines, and related appurtenance, etc.) not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard or supplemental Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for painting all the well facilities is **"Olive Drab 18-0622 TPX" (Colors derived from "PANTONE" For Architecture and Interiors Color Guide.)**

H. **Fence Requirement:**

The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair impacted improvements to at least their former state. On private surface the holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

I. **Open-vent Exhaust Stack Requirements:**

1. All open-vent exhaust stacks associated with heater-treater, separators and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.

2. New production equipment installed on federal leases after November 1st, 1993, shall have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and to the extent practical, to discourage perching, and nesting.

V. Invasive and Noxious Weeds Requirement:

A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

VI. SPECIAL REQUIREMENT(S): NONE