OK 7036 187 S ATS-08-185

Form 3160-3
(April 2004)

OCD-ARTESIA

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

HIGH CAVEKARST UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

R-111-POTASH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM-105557

6. If Indian, Allotee or Tribe Name ----------

1a. Type of work: [X] DRILL [ ] REENTER

FEB 21 2008
OCD-ARTESIA

7. If Unit or CA Agreement, Name and No. ----------

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [XX] Single Zone [ ] Multiple Zone

8. Lease Name and Well No. 303865
GOODNIGHT"27" FEDERAL # 2H

2. Name of Operator
LATIGO PETROLEUM, INC. (MARK FAIRCHILD 432-685-8188) 227001

9. API Well No.
30-015-36137

3a. Address P. O. BOX 10340
MIDLAND, TEXAS 79702-7340

3b. Phone No. *(include area code)*
432-685-8100

10. Field and Pool, or Exploratory
~~CEDAR~~ CANYON-BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 2460' FSL & 1330' FWL SECTION 27 T23S-R29E EDDY CO. NM
At proposed prod. zone 1980' FSL & 330' FEL SECTION 27 T23S-R29E

11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 27 T23S-R29E

Carlsbad Controlled Water Basin

14. Distance in miles and direction from nearest town or post office*
Approximately 10 miles Southeast of Loving New Mexico

12. County or Parish
EDDY CO.

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
1330'	640	120 ACRES
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
840'	TVD-7800' MD-11,213'	NATION WIDE WYB-000238
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3003' GL	WHEN APPROVED	47 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)*	Date
Joe T. Janica	Joe T. Janica	11/16/07

Title: Permit Engineer

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Linda S. C. Rundell	/s/ Linda S. C. Rundell	FEB 15 2008

Title	Office
STATE DIRECTOR	NM STATE OFFICE

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.

APPROVAL FOR TWO YEARS

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 United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

API Number	Pool Code	Pool Name
	~~[illegible]~~ 96857	S. Laguna Salado ~~CEDAR CANYON~~-BONE SPRING

Property Code	Property Name	Well Number
	GOODNIGHT "27" FEDERAL	2H

OGRID No.	Operator Name	Elevation
27001	LATIGO PETROLEUM INC.	3003'

Surface Location

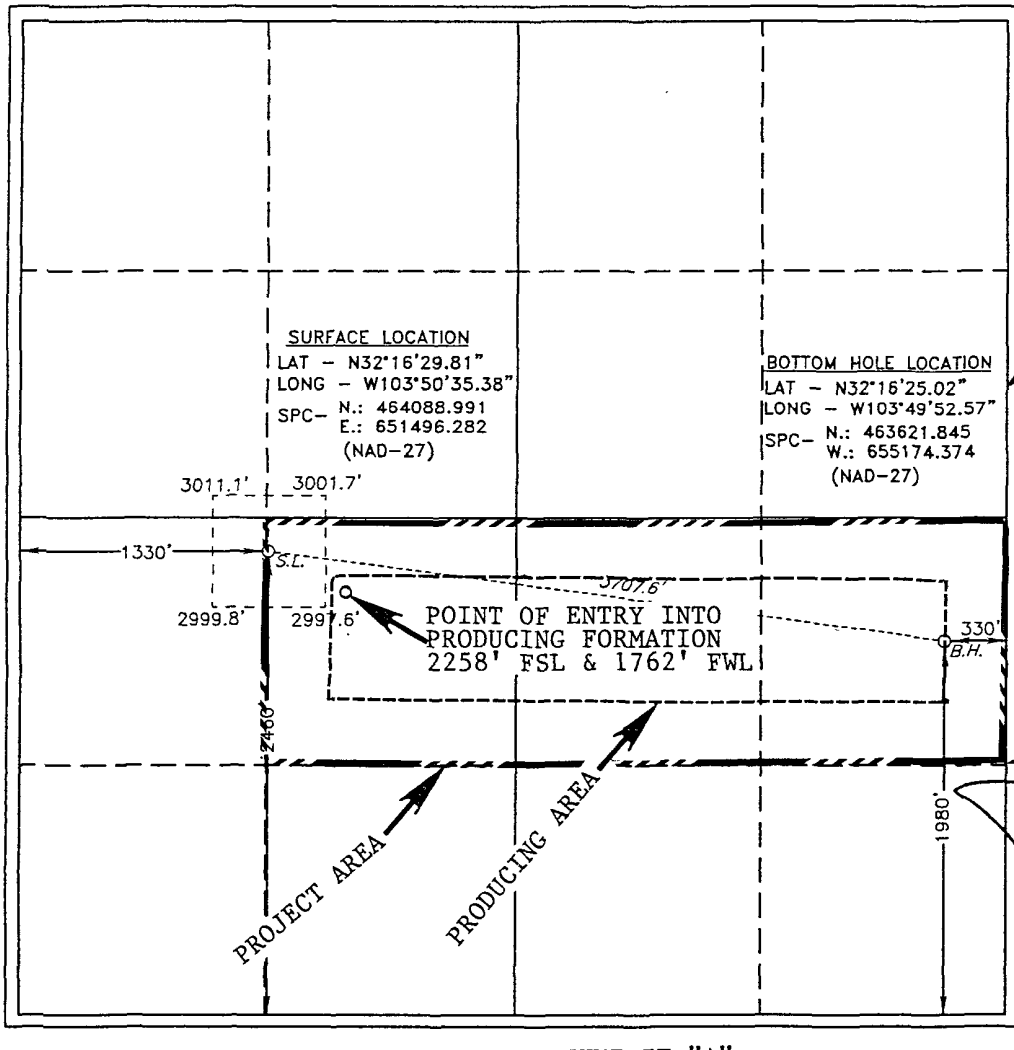
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	27	23 S	29 E		2460	SOUTH	1330	WEST	EDDY

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
1	27	23 S	29 E		1980	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
120			

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



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 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.

Signature Date

Joe T. Janica 11/16/07

Printed Name

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 supervison, and that the same is true and correct to the best of my belief.

OCTOBER 04, 2007

Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 18637

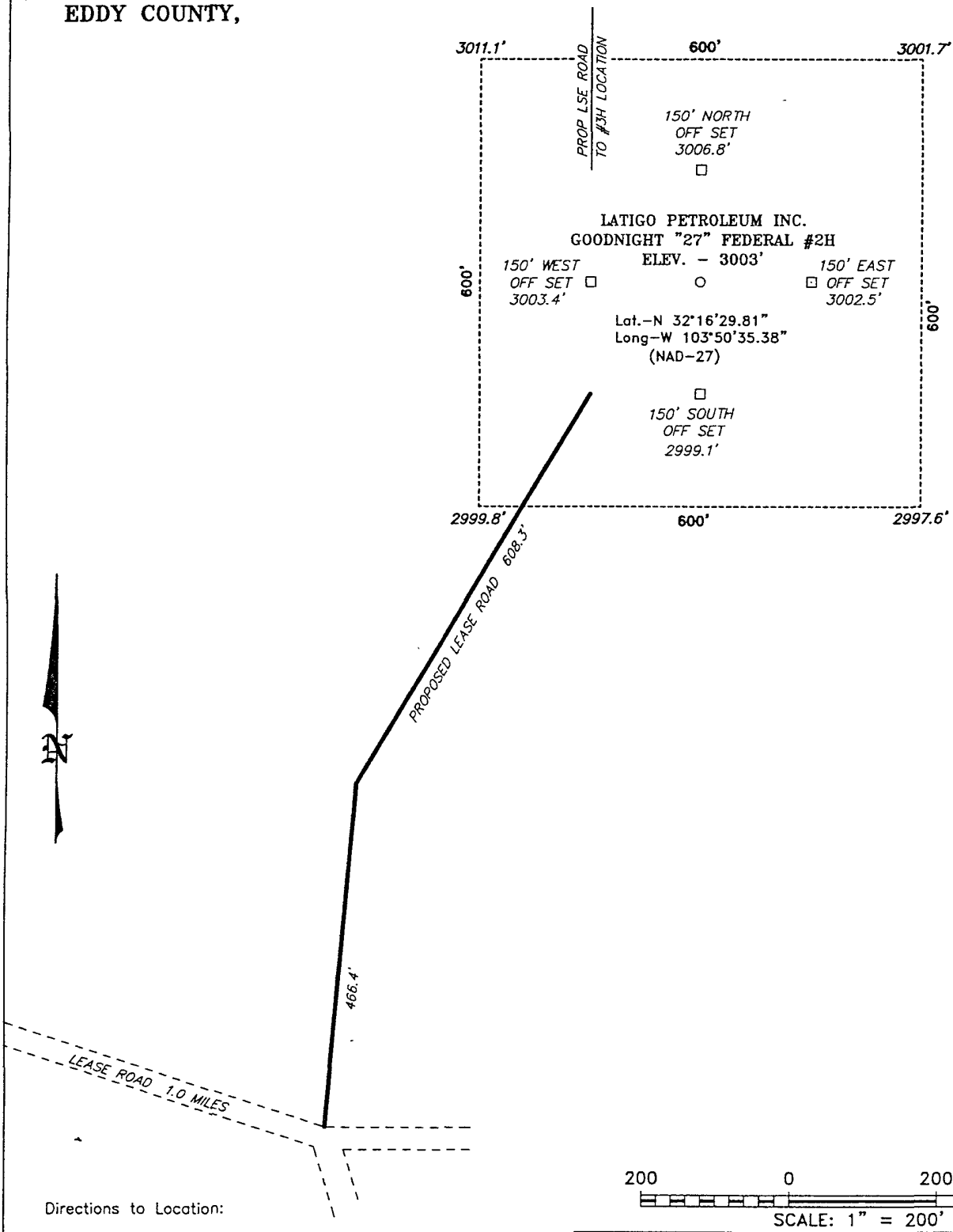
Certificate No. Gary L. Jones 7977

BASIN SURVEYS

EXHIBIT "A"

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF STATE HWY 128 AND CO. RD. 793 (RAWHIDE), GO SOUTH ON CO. RD. 793 FOR 3.5 MILES TO LEASE ROAD, ON LEASE ROAD TO WEST 3.5 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTH WINDING EAST 1.0 MILES TO PROPOSED LEASE ROAD.

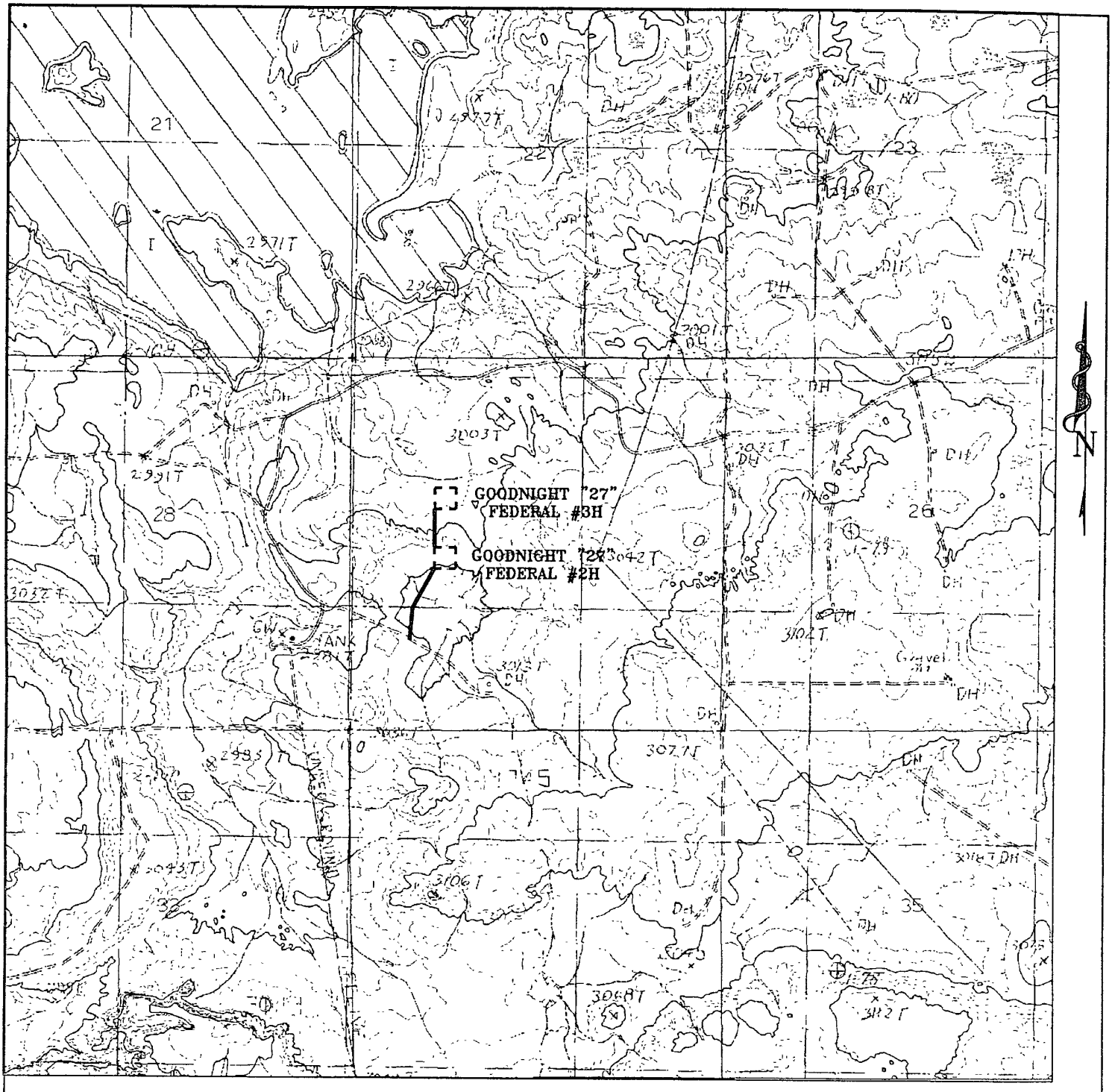
LATIGO PETROLEUM INC.

REF: GOODNIGHT "27" FEDERAL #2H / WELL PAD TOPO

THE GOODNIGHT "27" FEDERAL #2H LOCATED 2460' FROM THE SOUTH LINE AND 1330' FROM THE WEST LINE OF SECTION 27, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 18637	Drawn By: J. M. SMALL		
Date: 10-05-2007	Disk: JMS 18637W	Survey Date: 10-04-2007	Sheet 1 of 1 Sheets

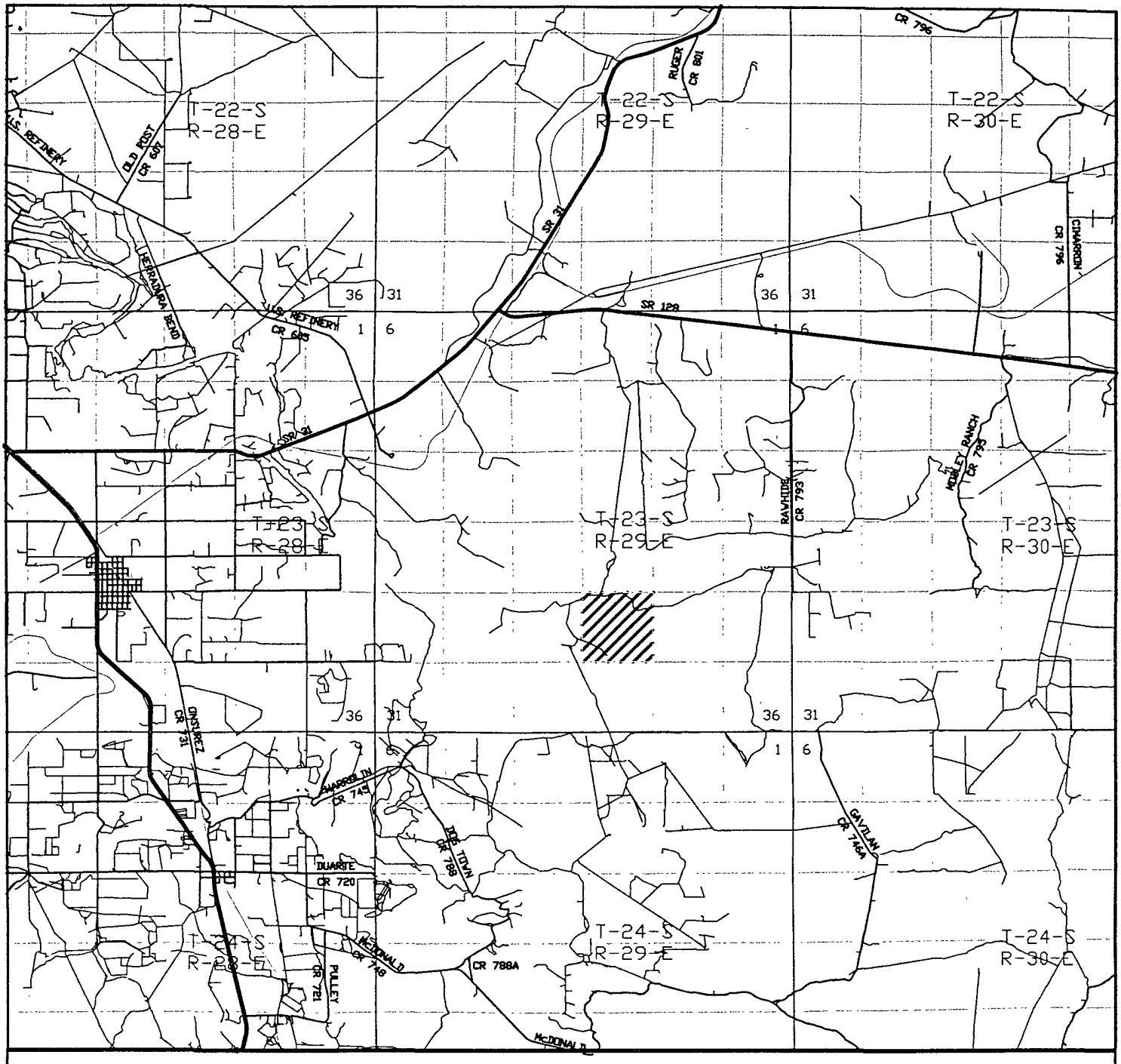


GOODNIGHT "27" FEDERAL #2H
Located at 2460' FSL and 1330' FWL
Section 27, Township 23 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	18637T
Survey Date:	10-04-2007
Scale:	1" = 2000'
Date:	10-05-2007

LATIGO PETROLEUM INC.



GOODNIGHT "27" FEDERAL #2H
Located at 2460' FSL and 1330' FWL
Section 27, Township 23 South, Range 29 East,
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basin surveys
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P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	18637TR
Survey Date:	10-04-2007
Scale:	1" = 2 MILES
Date:	10-05-2007

LATIGO PETROLEUM INC.

APPLICATION TO DRILL

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6, the following information on the above will is provided for your information.

1. LOCATION: 2460' FSL & 1330' FWL SECTION 27 T23S-R29E EDDY CO. NM

2. ELEVATION ABOVE SEA LEVEL: 3003' GL

3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: TVD-7800' MD-11,263'

6. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Basal Anhydrite	2950'	Brushy Canyon	5250'
Delaware Lime	3150'	Bone Spring	6900'
Delaware Sand	3200'	1st Bone Spring Pay	7800'
Cherry Canyon	4000'	MD.	11,263'

7. POSSIBLE MINERAL BEARING FORMATION:

Delaware Sand	Oil
Bone Spring	Oil

8. CASING PROGRAM:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade	
26"	0-40	20"	NA	NA	NA	Conductor	New
17½"	0-550'	13 3/8"	48#	8-R	ST&C	H-40	New
12¼"	0-3000'	9 5/8"	36#	J-55	LT&C	J-55	New
8½"-7 7/8"	0-11,263'	5½"	17#	8-R BT	LT&C BT&C	N-80	New

CASING SAFETY FACTORS: Collapse 1.25 Burst 1.1 Joint 8-R 1.8 BUTT 1.6 Body Yield 1.5

APPLICATION TO DRILL

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 550' of 13 3/8" 48# H-40 ST&C casing. Cement with 450 Sx. of 65/35 Class "C" POZ + 6% Gel + 5% Salt, yield 1.89, tail in with 200 Sx. of Class "C" cement + 2% CaCl, Yield 1.32, circulate cement to surface.
9 5/8"	Intermediate	Set 3000' of 9 5/8" 36# J-55 LT&C casing. Cement with 800 Sx. of 65/35 Class "C" POZ + 6% Gel, + 5% Salt Yield 2.09, Tail in with 200 Sx of Class "C" cement + 1% CaCl Yield 1.32, circulate cement to surface.
5½"	Production	Set 11,213' of 5½" 17# N-80 LT&C,BTC,. Cement in 3 stages with DV Tools at 4500'±, & 2500'±. Cement 1 st stage with 1800 Sx. of Class "C" cement + 1.25% fluid loss additive,+ .75% disp, + 8# of Gilsonite/Sx. + .25# Flocels/Sx. Yield 1.50. Cement 2nd stage with 650 Sx. of Class "C" cement + 1.25% fluid loss additive,+ .75% disp, + 8# of Gilsonite/ Sx. + .25# folcels/Sx. Cement 3rd stage with 650 Sx. of 65/35 Class "C" POZ cement + 6% Gel, + 5% Salt Yield 2.09, tail in with 100 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface Yield 1.32.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 Series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nippled up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 5000 PSI working pressure choke manifold with dual adjustable chokes. No abnormal pressure or temperatures are expected while drilling this well.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-550'	8.4-8.7	29-32	NC	Fresh water Spud mud add paper to control seepage.
550-3000'	10.0-10.2	29-36	NC	Brine water use paper to control seepage, and high viscosity sweeps to clean hole.
3000-11,263.	10.0-10.1	32-37	NC*	Same as above.

* If water loss control is necessary to protect the producing formation, from damage, and the hole in condition to run logs and/or DST's, use a polymer mud system.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run open hole logs, DST's, or casing the water loss may have to be controled.

12. LOGGING, COREING & TESTING PROGRAM:

A. Open hole logs: Dual Laterolog, SNP, LDT, Gamma Ray, Caliper from 7800'± back to 9 5/8" casing shoe.

B. Cased hole logs: Gamma Ray, Neutron from 9 5/8" casing shoe back to surface.

C. No DST's are planned at this time.

D. No cores are planned at this time. Mud logger will be placed on the hole at 3000'± and remain on hole to TD is reached.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3550 PSI, and Estimated BHT 155°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 45 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The BONE SPRING formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

Well name:	**Goodnight 27 Fd # 2H**
Operator:	**Pogo Producing Co**
String type:	Surface
Location:	New Mexico

Design parameters:

Collapse
Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 293 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 359 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 474 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 79 °F
Temperature gradient: 0.75 °F/100ft
Minimum section length: 550 ft

Cement top: Surface

Non-directional string.

Re subsequent strings:
Next setting depth: 3,000 ft
Next mud weight: 10.000 ppg
Next setting BHP: 1,558 psi
Fracture mud wt: 11.000 ppg
Fracture depth: 650 ft
Injection pressure 371 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	550	13.375	48.00	H-40	ST&C	550	550	12.59	485

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	271	740	2.726	359	1730	4.81	23	322	14.17 J

Prepared by: Richard Wright
Pogo Producing Company
Phone: 432 685 8140
FAX: 432 685 8150
Date: September 18,2007
Houston,TX

Remarks:
Collapse is based on a vertical depth of 550 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	**Goodnight 27 Fd # 2H**
Operator:	**Pogo Producing Co**
String type:	Intermediate
Location:	New Mexico

Design parameters:

Collapse
- Mud weight: 9.500 ppg
- Design is based on evacuated pipe.

Burst
- Max anticipated surface pressure: 1,354 psi
- Internal gradient: 0.120 psi/ft
- Calculated BHP 1,714 psi
- No backup mud specified.

Minimum design factors:

Collapse:
- Design factor 1.125

Burst:
- Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

- Tension is based on buoyed weight.
- Neutral point: 2,578 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature:	98 °F
Temperature gradient:	0.75 °F/100ft
Minimum section length:	550 ft
Minimum Drift:	8.500 in
Cement top:	Surface

Non-directional string.

Re subsequent strings:

Next setting depth:	7,800 ft
Next mud weight:	9.500 ppg
Next setting BHP:	3,849 psi
Fracture mud wt:	11.000 ppg
Fracture depth:	3,000 ft
Injection pressure	1,714 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	3000	9.625	36.00	J-55	LT&C	3000	3000	8.796	1302.2

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1481	2020	1.364	1714	3520	2.05	93	453	4.88 J

Prepared by: Richard Wright
Pogo Producing Company
Phone: 432 685 8140
FAX: 432 685 8150

Date: September 18,2007
Houston,TX

Remarks:
Collapse is based on a vertical depth of 3000 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	**Goodnight 27 Fd # 2H**
Operator:	**Pogo Producing Co**
String type:	Production: Frac
AFE No.:	AFE No default
Location:	New Mexico

Design parameters:

Collapse
Mud weight: 11.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 3,521 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 4,457 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.000

Burst:
Design factor 1.00

Tension:
8 Round STC: 9.90 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 6,499 ft

Estimated cost: 62,809 ($)

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 134 °F
Temperature gradient: 0.75 °F/100ft
Minimum section length: 100 ft

Cement top: Surface

Directional Info - Build & Hold
Kick-off point 7323 ft
Departure at shoe: 3299 ft
Maximum dogleg: 12 °/100ft
Inclination at shoe: 90 °

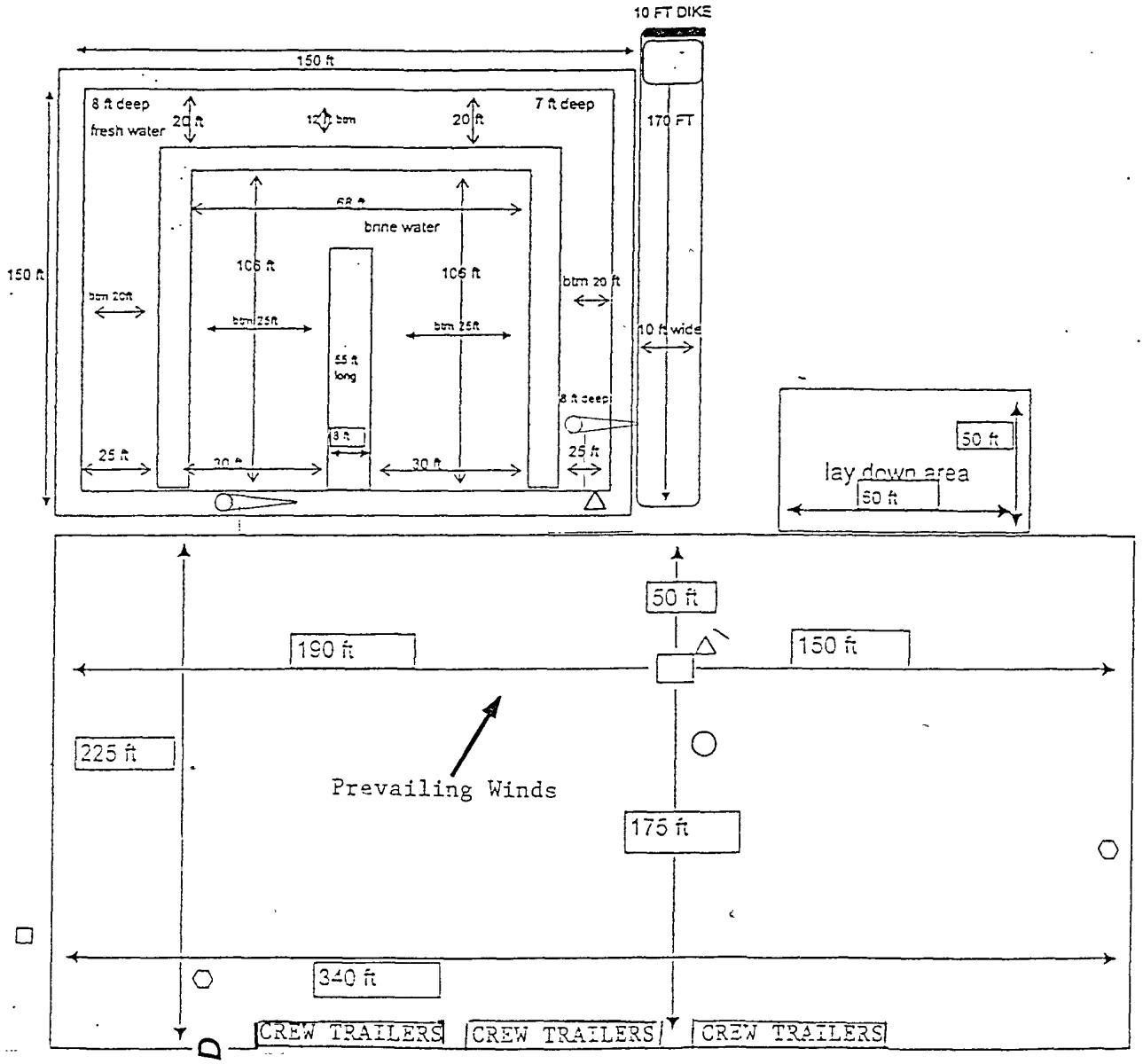
Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
2	7300	5.5	17.00	N-80	LT&C	7300	7300	4.767	41146
1	3595	5.5	17.00	N-80	Buttress	7801	10895	4.767	21663

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	4171	6254	1.499	4397	7740	1.76	132.6	348	2.62 J
1	4457	6290	1.411	4457	6950	1.56	8.5	397	46.66 B

Prepared by: Richard Wright
Pogo Producing Company
Phone: 432 685 8140
FAX: 432 685 8150
Date: September 18,2007
Houston,TX

Remarks
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.
Collapse strength is not adjusted for doglegs in directional wells.



Wind Direction Indicators
(wind sock or streamers)

△ H2S Monitors
(alarms at bell nipple and shale shaker)

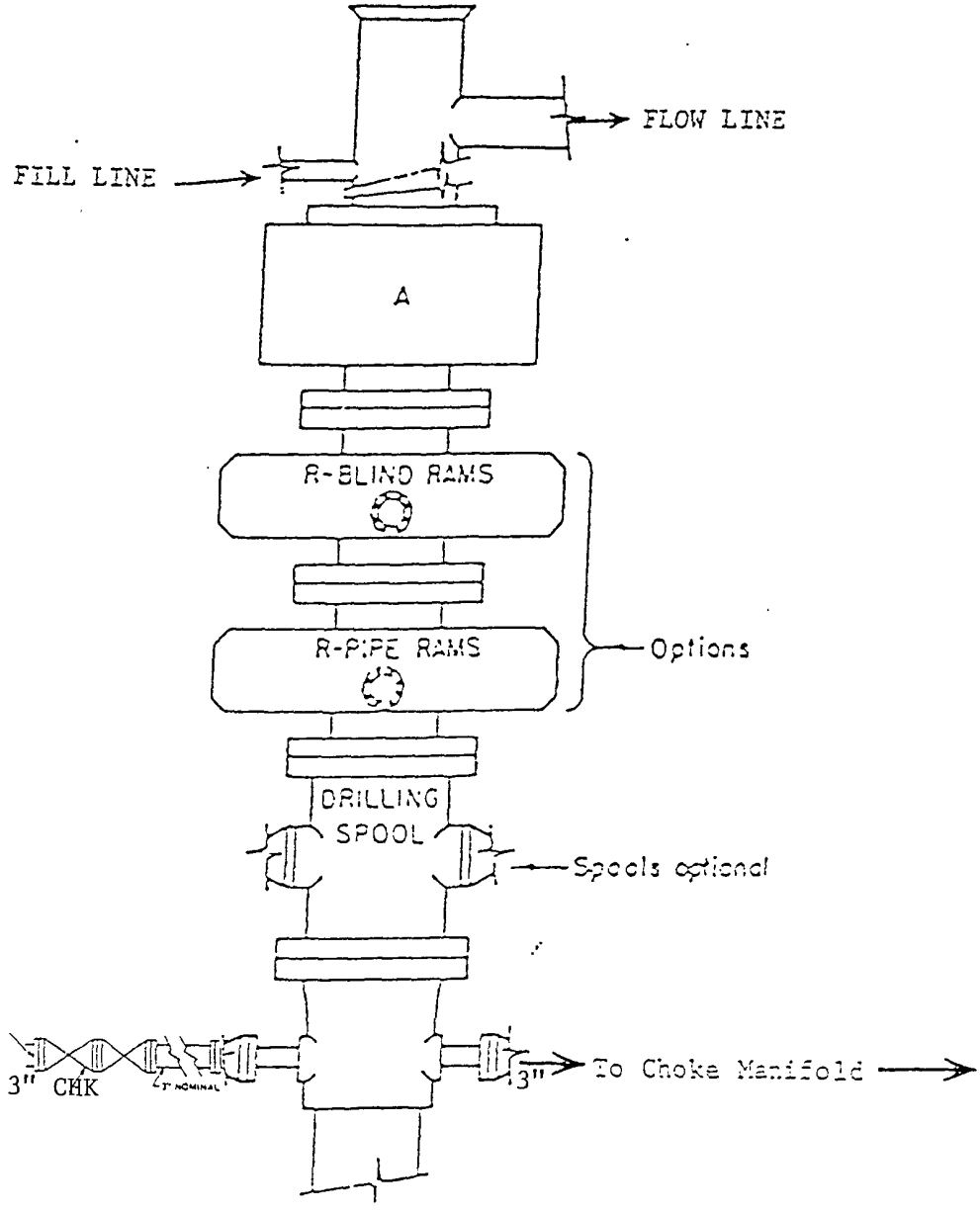
Briefing Areas

○ Remote BOP Closing Unit

□ Sign and Condition Flags

EXHIBIT "D"
RIG LAY OUT PLAT

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM



ARRANGEMENT SRRA

900 Series
3000 PSI WP

EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #@H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

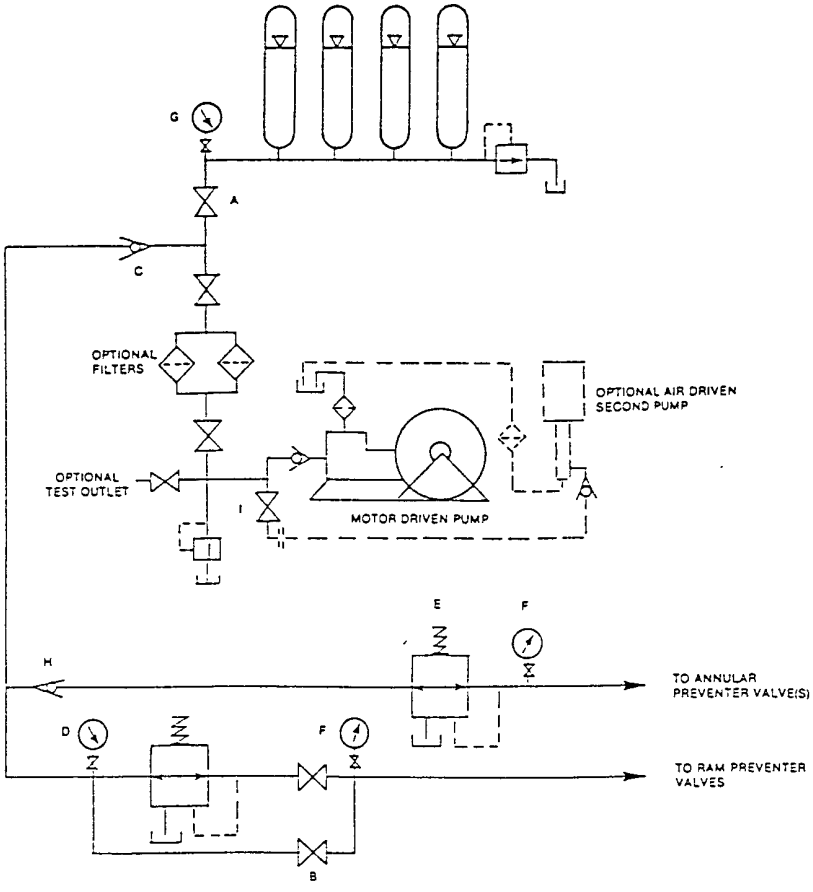


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

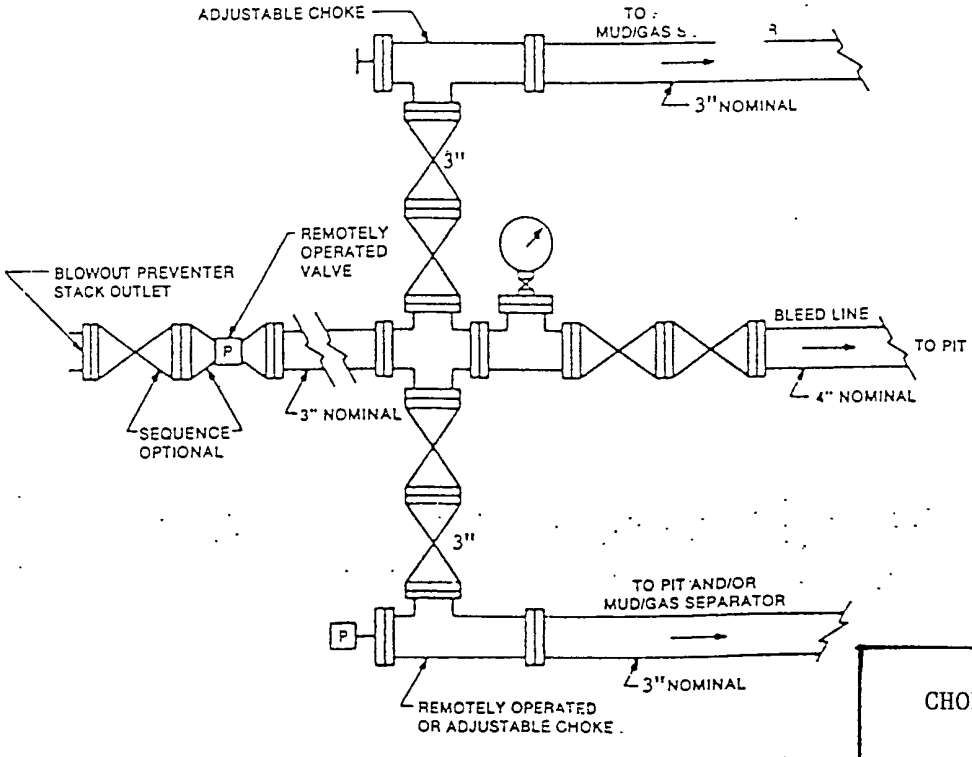


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

#N/A	E/W COORDINATE OF DEPTH (feet)		
	3 D DISTANCE BETWEEN STATION A AND STATION B	0.00	ft
		Calculator =	

TABLE OF SURVEY STATIONS

STA #	ΔMD ft	INCL deg	AZIM deg	MD ft	TVD ft	N+/S- ft	E+/W- ft	DLS deg/100FT
1	TIE POINT =>	0	0	7323.00	7323.00	0.00	0.00	-
2	50	6	115.1148	7373.00	7372.91	-1.11	2.37	12.00
3	50	12	115.1148	7423.00	7422.27	-4.43	9.45	12.00
4	50	18	115.1148	7473.00	7470.54	-9.92	21.16	12.00
5	50	24	115.1148	7523.00	7517.20	-17.52	37.38	12.00
6	50	30	115.1148	7573.00	7561.73	-27.15	57.92	12.00
7	50	36	115.1148	7623.00	7603.65	-38.70	82.57	12.00
8	50	42	115.1148	7673.00	7642.49	-52.05	111.04	12.00
9	50	48	115.1148	7723.00	7677.83	-67.05	143.04	12.00
10	50	54	115.1148	7773.00	7709.28	-83.54	178.21	12.00
11	50	60	115.1148	7823.00	7736.50	-101.33	216.16	12.00
12	50	66	115.1148	7873.00	7759.19	-120.23	256.48	12.00
13	50	72	115.1148	7923.00	7777.10	-140.03	298.73	12.00
14	50	78	115.1148	7973.00	7790.03	-160.52	342.44	12.00
15	50	84	115.1148	8023.00	7797.85	-181.47	387.13	12.00
16	50	90	115.1148	8073.00	7800.46	-202.65	432.32	12.00
17	100	90	105	8173.00	7800.46	-236.90	526.14	10.11
18	100	90	95	8273.00	7800.46	-254.25	624.49	10.00
19	100	90	90	8373.00	7800.46	-258.61	724.37	5.00
20	100	90	90	8473.00	7800.46	-258.61	824.37	0.00
21	100	90	90	8573.00	7800.46	-258.61	924.37	0.00
22	100	90	90	8673.00	7800.46	-258.61	1024.37	0.00
23	100	90	90	8773.00	7800.46	-258.61	1124.37	0.00
24	100	90	90	8873.00	7800.46	-258.61	1224.37	0.00
25	100	90	90	8973.00	7800.46	-258.61	1324.37	0.00
26	100	90	90	9073.00	7800.46	-258.61	1424.37	0.00
27	100	90	90	9173.00	7800.46	-258.61	1524.37	0.00
28	100	90	90	9273.00	7800.46	-258.61	1624.37	0.00
29	100	90	90	9373.00	7800.46	-258.61	1724.37	0.00
30	100	90	90	9473.00	7800.46	-258.61	1824.37	0.00
31	100	90	90	9573.00	7800.46	-258.61	1924.37	0.00
32	100	90	90	9673.00	7800.46	-258.61	2024.37	0.00
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34	100	90	90	9873.00	7800.46	-258.61	2224.37	0.00
35	100	90	90	9973.00	7800.46	-258.61	2324.37	0.00
36	100	90	90	10073.00	7800.46	-258.61	2424.37	0.00
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42	100	90	90	10673.00	7800.46	-258.61	3024.37	0.00
43	100	90	90	10773.00	7800.46	-258.61	3124.37	0.00
44	490	90	90	11263.00	7800.46	-258.61	3614.37	0.00

GOODNIGHT 27 FED # 2H

TVD	N/S	E/W		
1343	0.00	0.00	0	10
2343	0.00	0.00	0	10
3343	0.00	0.00	0	10
4343	0.00	0.00	0	10
5343	0.00	0.00	0	10
6343	0.00	0.00	0	10
7323.00	0.00	0.00	0	0
7372.91	**-1.11**	**2.37**	6.841375	2.615602
7422.27	**-4.43**	**9.45**	108.8632	10.43375
7470.54	**-9.92**	**21.16**	546.1004	23.36879
7517.20	**-17.52**	**37.38**	1703.956	41.279
7561.73	**-27.15**	**57.92**	4091.925	63.96816
7603.65	**-38.70**	**82.57**	8315.191	91.18767
7642.49	**-52.05**	**111.04**	15040.4	122.6393
7677.83	**-67.05**	**143.04**	24957.21	157.9785
7709.28	**-83.54**	**178.21**	38737.34	196.818
7736.50	**-101.33**	**216.16**	56993.17	238.7324
7759.19	**-120.23**	**256.48**	80237.58	283.2624
7777.10	**-140.03**	**298.73**	108847.3	329.9201
7790.03	**-160.52**	**342.44**	143030.9	378.1943
7797.85	**-181.47**	**387.13**	182804.3	427.5562
7800.46	**-202.65**	**432.32**	227972.7	477.4648
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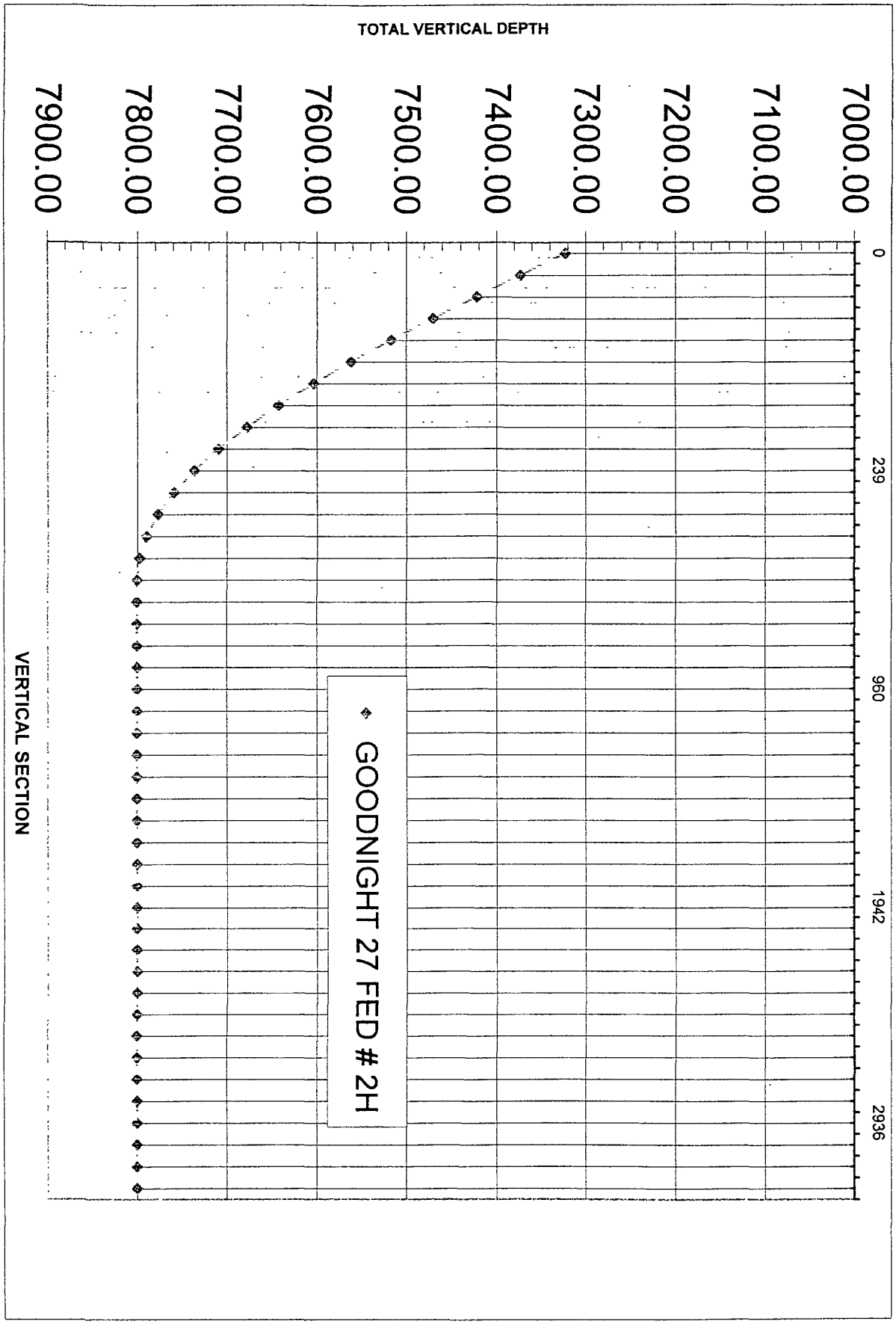
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7400.00
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7800.00
7900.00
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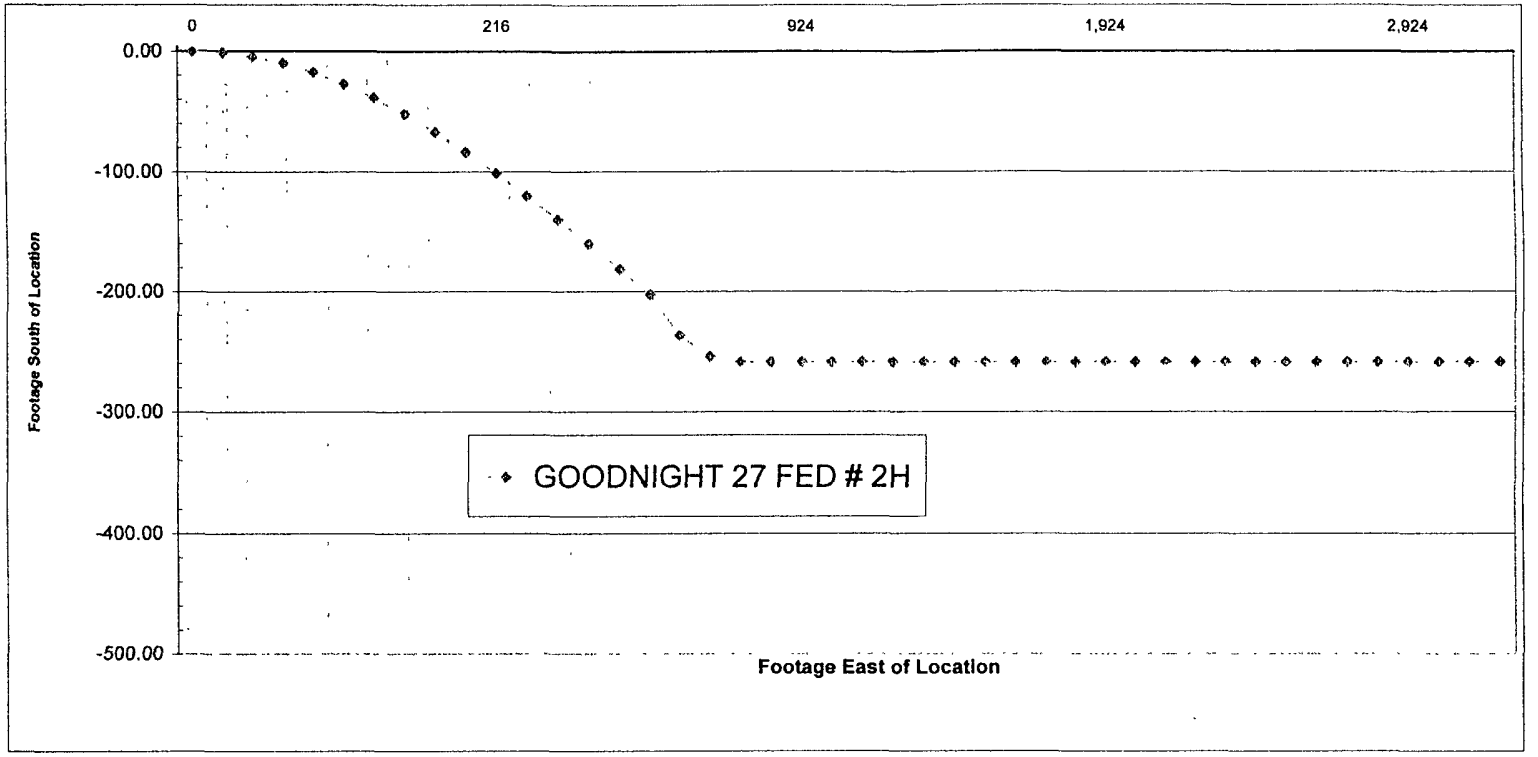
1942
2936
GOODNIGHT 27 FED # 2H
VERTICAL SECTION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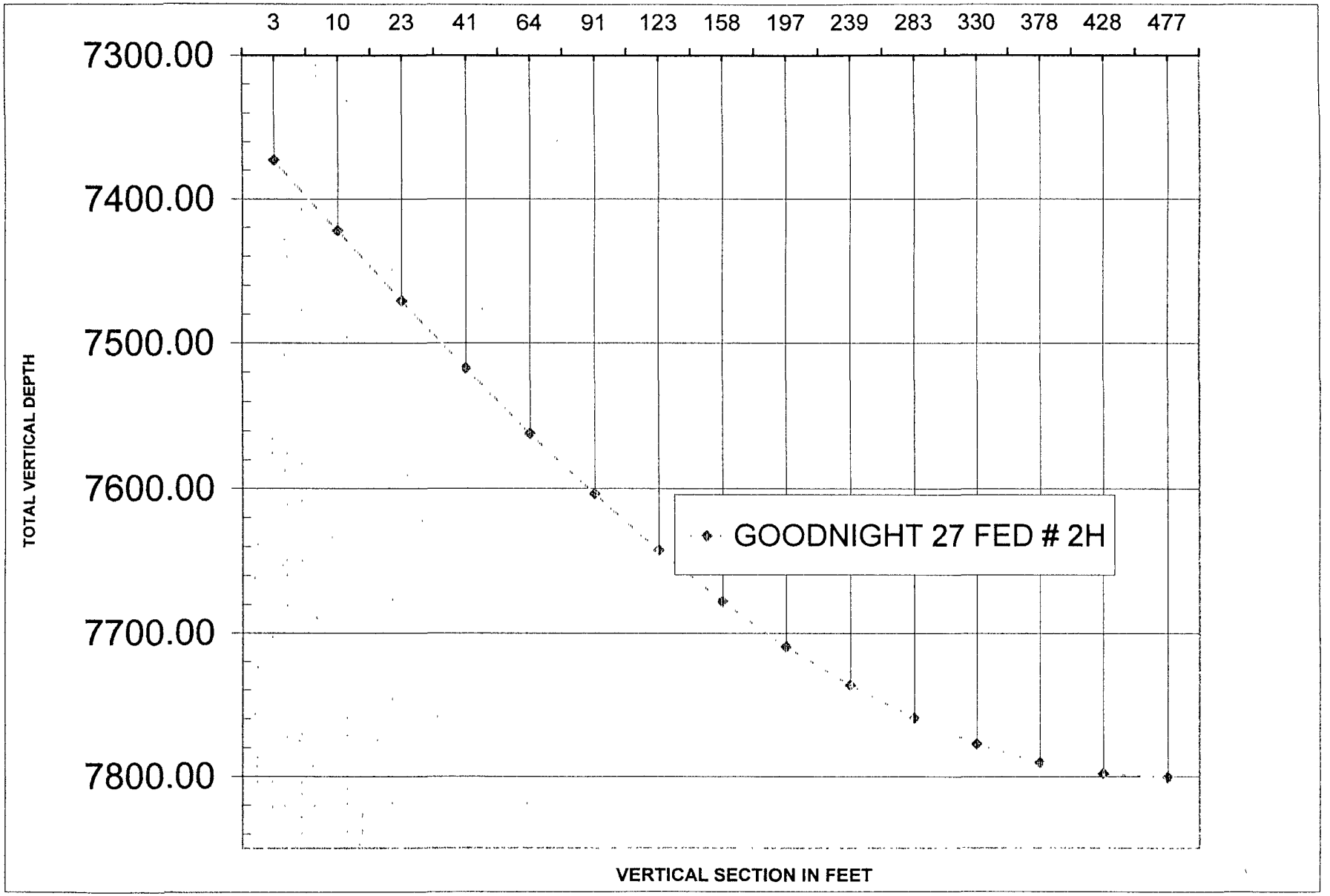
Footage South of Location
Footage East of Location
GOODNIGHT 27 FED # 2H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7400.00
7500.00
7600.00
7700.00
7800.00
TOTAL VERTICAL DEPTH
GOODNIGHT 27 FED # 2H
VERTICAL SECTION IN FEET

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2. H_2S Detection and Alarm Systems

   A. H_2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3. Windsock and/or wind streamers

   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.
   C. There should be a windsock at entrance to location.

4. Condition Flags and Signs

   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H_2S present in dangerous concentration. Only emergency personnel admitted to location.

5. Well control equipment

   A. See exhibit "E"

6. Communication

   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.

7. Drillstem Testing

   A. Exhausts will be watered.
   B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
   C. If location is near any dwelling a closed D.S.T. will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

SURFACE USE PLAN

LATIGO PERTOLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R@9E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.

B. Exhibit "A" shows the proposed well site as staked.

C. Directions to location: From Hobbs New Mexico take U.S. Hi-way 62-180 West toward Carlsbad New Mexico 42± miles to WIPP road, turn Left (South) go 13 miles to Co Road 802, turn Right (West) go 3.7 miles to State Road 128, turn Right (West) go 6 miles to Co Road 793 (Rawhide Road) turn Left (South) go 3.5 miles, turn Right (West) follow 3.5 miles bear Left (South) go .9± miles, turn Left (North) go .2± miles to location.

D. Exhibit "C" shows a topographic map showing roads and proposed flowline route to tank battery at well # 1.

2. PLANNED ACCESS ROADS: Approximately 1100' of new road will be constructed.

A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.

B. Gradient of all roads will be less than 5%.

C. Turn-outs will be constructed where necessary.

D. If require new access roads will be surface with a minimum of 4-6" of caliche. this material will be obtained from a local source.

E. Center line for new roads will be flagged, road construction will be done as field conditions require.

F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS: EXHIBIT "A-1"

A. Water wells - None known

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "A-1"

E. Abandoned wells - As shown on Exhobit "A-1"

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Exhibit "C" shows proposed roads , flowlines and powerlines.

5. LOCATION & TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the location access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of the drill site, if additional material is required it will be obtained from a local source and transported over the location access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE:

A. All trash, junk and other waste material will be contained in trash cages or trash bins in order to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

B. Sewage from living quatersw will be drained into holding tanks and will be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of well.

C. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a State approved disposal site. Later the pits will be broken out to speed drying. Water produced during completion will be stored in tanks and disposed of in State approved disposal site. Oil and condensate produced during completion will be put in storage tanks and sold.

D. Drill cuttings will be disposed of in resebev pits or if necessary will be taken to a State approved landfarm and disposed of properly.

E. Any remaining salts or mud additives will be collected by the supplier and to stock, this includes all broken bags.

8. ANCILLARY FACILITIES:

A. No camps or air strips will be constructed on location.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows the proposed well site layout.

B. This Exhibit shows the location of reserve pit, sump pits, and living facilities.

C. Mud pits in the active circulating system will be steel pits and the reserve pits will be unlined unless subsurface conditions encontered during pit construction indicate that a plastic liner is required to contain lateral migration.

D. If needed the reserve pits will be lined with polyethelene. The pit liner will be no less than12 mils thick and the liner will be extended at least 3 feet over the top of the dikes and secured in place to keep edge of liner in place.

E. The reserve pit will be fenced on three sides and fenced with four strands of barbed wire during drilling and completionphases. The 4th side will be fenced after drilling operations are complete and the drilling rig has moved out.If the well is a producer the mud pits will remain fenced in until the mud has dried up enough to break out the pits and reclaimed according to BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location and reserve pits will be allowed to dry properly, fluids may be moved and disposed of in accordance with article 7-E as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any will be reshaped to the original configuration with provisions made to alleviate furture erosion. In case of the well completed as a producer the drilling pad will be necessary to construct production facilities. After the area has been shaped and contoured top soil from the spoil pile will be placed over the disturbed area to the extent possible so that revegetation procedures can be accomplished to comply with the BLM specifications.

If the well is a dry hole the pad and road area will be contoured to match the existing terrain. Top soil will be spread to the extent possible and revegetation will be carried out according to the BLM specifications.

Should the well be a producer the previously noted procedures will apply to those areas which are not required for production facilities.

CERTIFICATION

I HEREBY CERTIFY THAT I OR PERSONS UNDER MY SUPERVISION HAVE INSPECTED THE PROPOSED DRILL SITE AND THE ACCESS ROAD ROUTES, THAT I AM FAMILIAR WITH THE CONDITIONS THAT CURRENTLY EXIST, AND THAT THE STATEMENTS MADE IN THIS PLAN ARE TO THE BEST OF MY KNOWLEDGE ARE TRUE AND CORRECT, AND THAT THE WORK ASSOCIATED WITH THE OPERATIONS PROPOSED HEREIN WILL BE PERFORMED BY LATIGO PETROLEUM, INC. ITS CONTRACTORS OR ITS SUB-CONTRACTORS IS IN CONFORMANCE WITH THIS PLAN AND THE TERMS AND THE CONDITIONS UNDER WHICH IT IS APPROVED. THIS STATEMENT IS SUBJECT TO THE PROVISIONS OF U.S.C. 1001 FOR THE FILING OF A FALSE STATEMENT.

OPERATORS REPRESENTATIVES

BEFORE CONSTRUCTION

JOE T. JANICA

TIERRA EXPLORATION, INC.
P. O. BOX 2188
HOBBS, NEW MEXICO 88241
PHONE 505-391-8503
CELL 505-390-1598

DURING AND AFTER CONSTRUCTION

PETE ORTIZ

LATIGO PETROLEUM, INC.
P. O. BOX 10340
MIDLAND, TEXAS 79702-7340
PHONE 432-685-8189

NAME; JOE JANICA Joe T. Janica

TITLE; PERMIT ENGINEER

DATE; 11/16/07

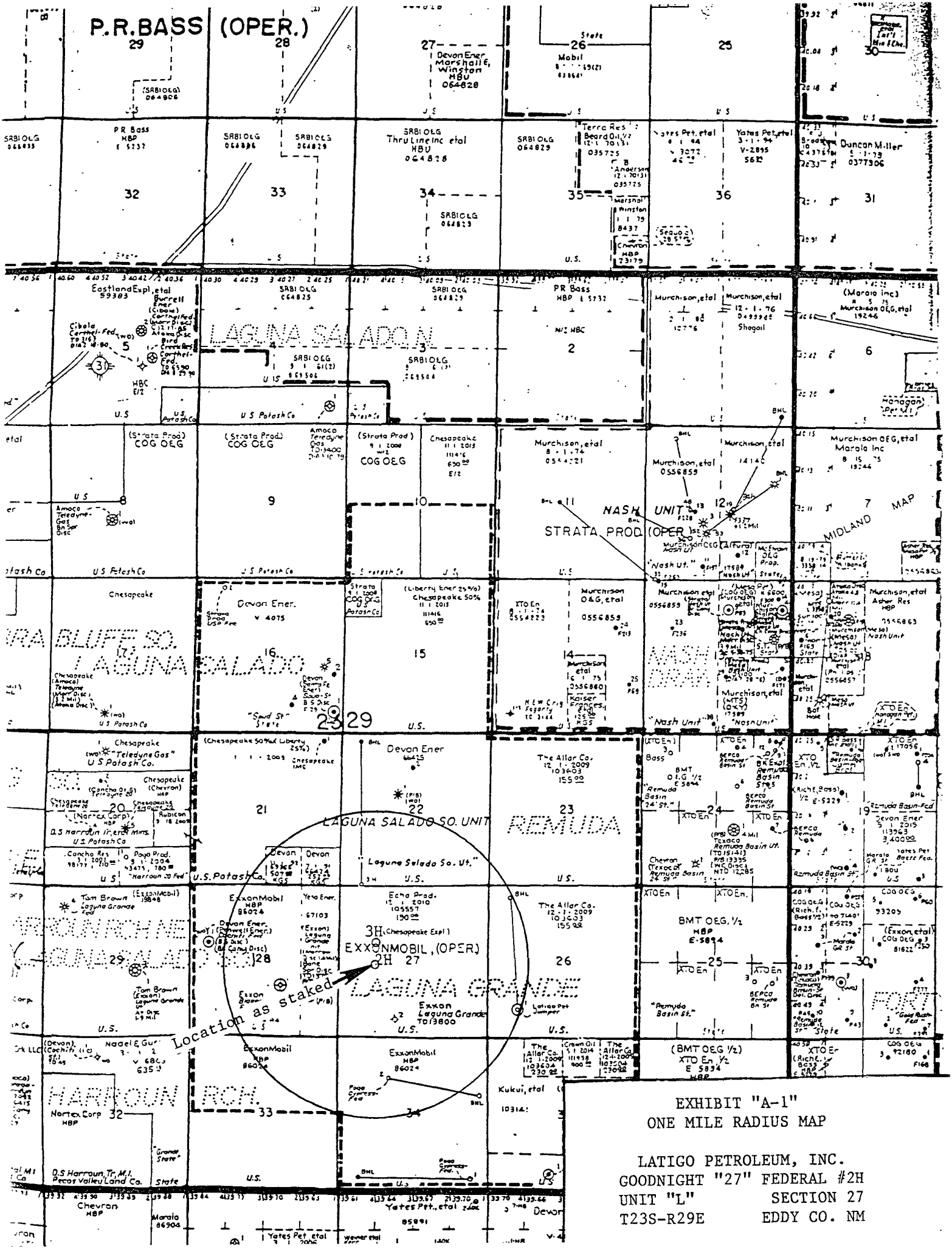


EXHIBIT "A-1"
ONE MILE RADIUS MAP

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

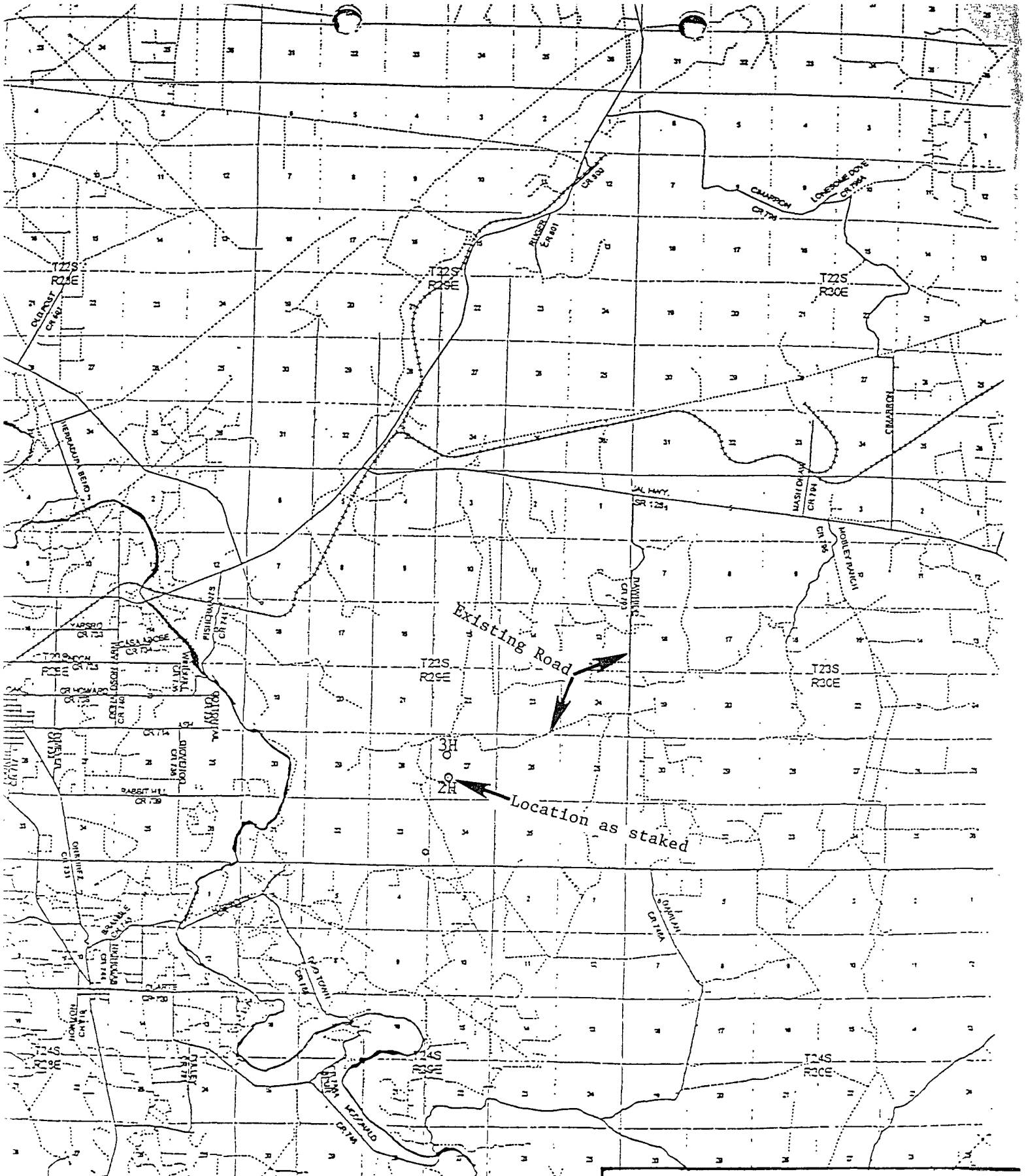


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R29E EDDY CO. NM

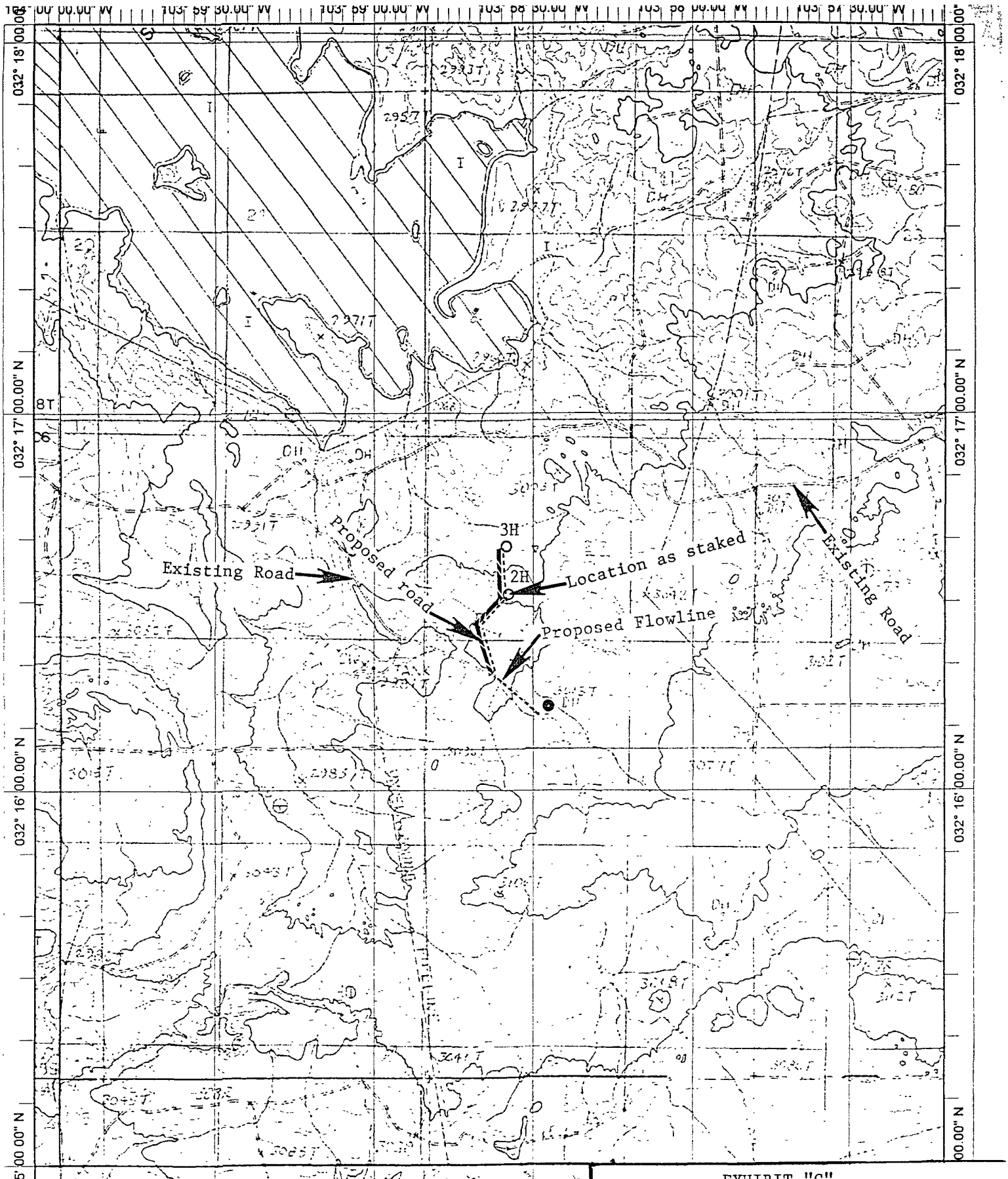
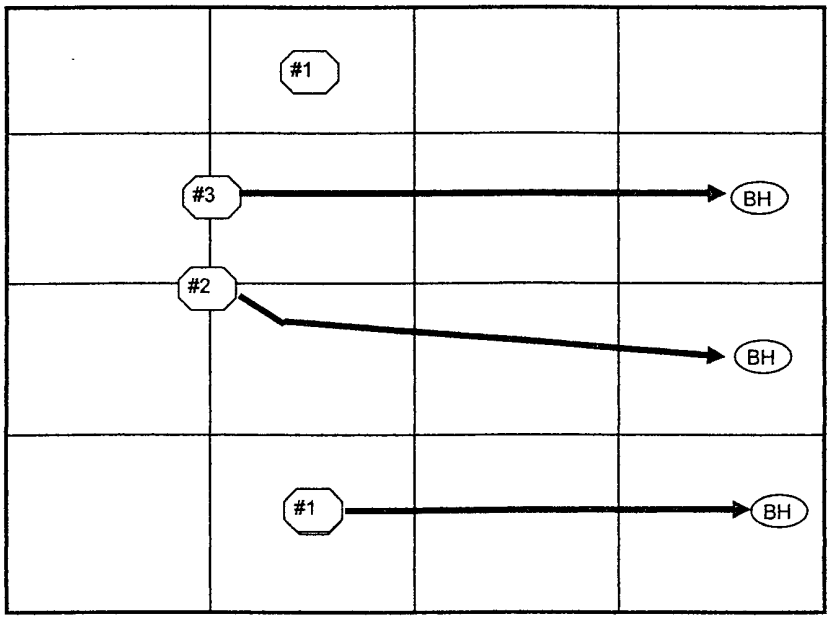


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

LATIGO PETROLEUM, INC.
GOODNIGHT "27" FEDERAL #2H
UNIT "L" SECTION 27
T23S-R@9E EDDY CO. NM

GOODNIGHT 27 FED Well Goupings

Sec 27, T-23-S, R-29-E, Eddy County, New Mexico



Well Name	Legal Location in 19	Depth and Strata	Current Prod Zone	
GOODNIGHT 27 FED # 2H	2460 FSL & 1330 FWL	1ST BONE SPRINGS	PROPOSED	BHL = 198
GOODNIGHT 27 FED # 3	1980 FNL & 1330 FWL	1ST BONE SPRINGS	PROPOSED	
GOODNIGHT 27 FED # 1 ReEntry	660 FSL & 1980 FWL	1ST BONE SPRGS	1ST BONE PRODUCER	
LAGUNA SALADO S. UNIT # 2	660 FSL & 1980 FWL	TD= 13806 MORROW	WELL P&A'D	
LAGUNA SALADO S. UNIT # 1	660 FNL & 1980 FWL	PROPOSED MORROW	NOT DRILLED	

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	LATIGO PETROLEUM INC
LEASE NO.:	NM-105557
WELL NAME & NO.:	2H-GOODNIGHT 27 FEDERAL
SURFACE HOLE FOOTAGE:	2460' FSL &1330' FWL
BOTTOM HOLE FOOTAGE	1980' FSL & 330' FEL
LOCATION:	Section 27, T. 23 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

To prevent any spills entering the sinkhole which the project located, the entire pad's edge will be bermed with caliche (including of sort of berm for the road access).

Cave/Karst Subsurface Mitigation
The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone as identified in the geologic report.

Casing:
All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a void (bit drops) of four feet or more and circulation losses greater then 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be

notified by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

Record Keeping:
The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 150' X 150' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

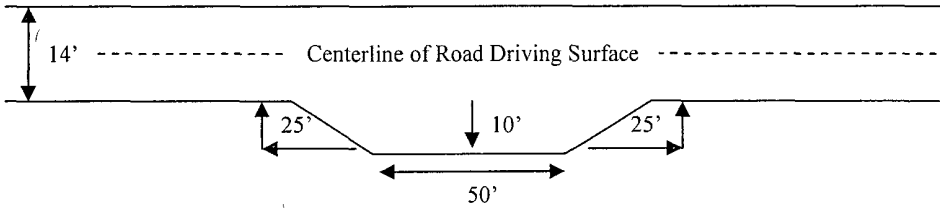
Ditching

Ditching shall be required on both sides of the road.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

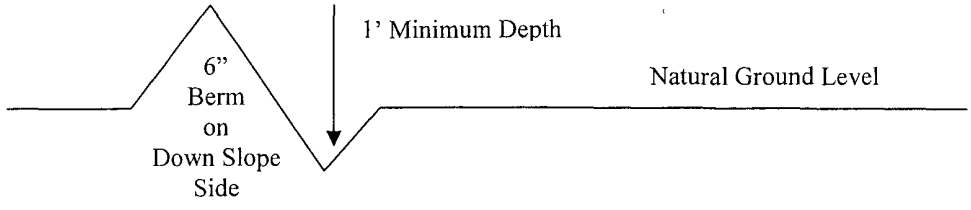


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

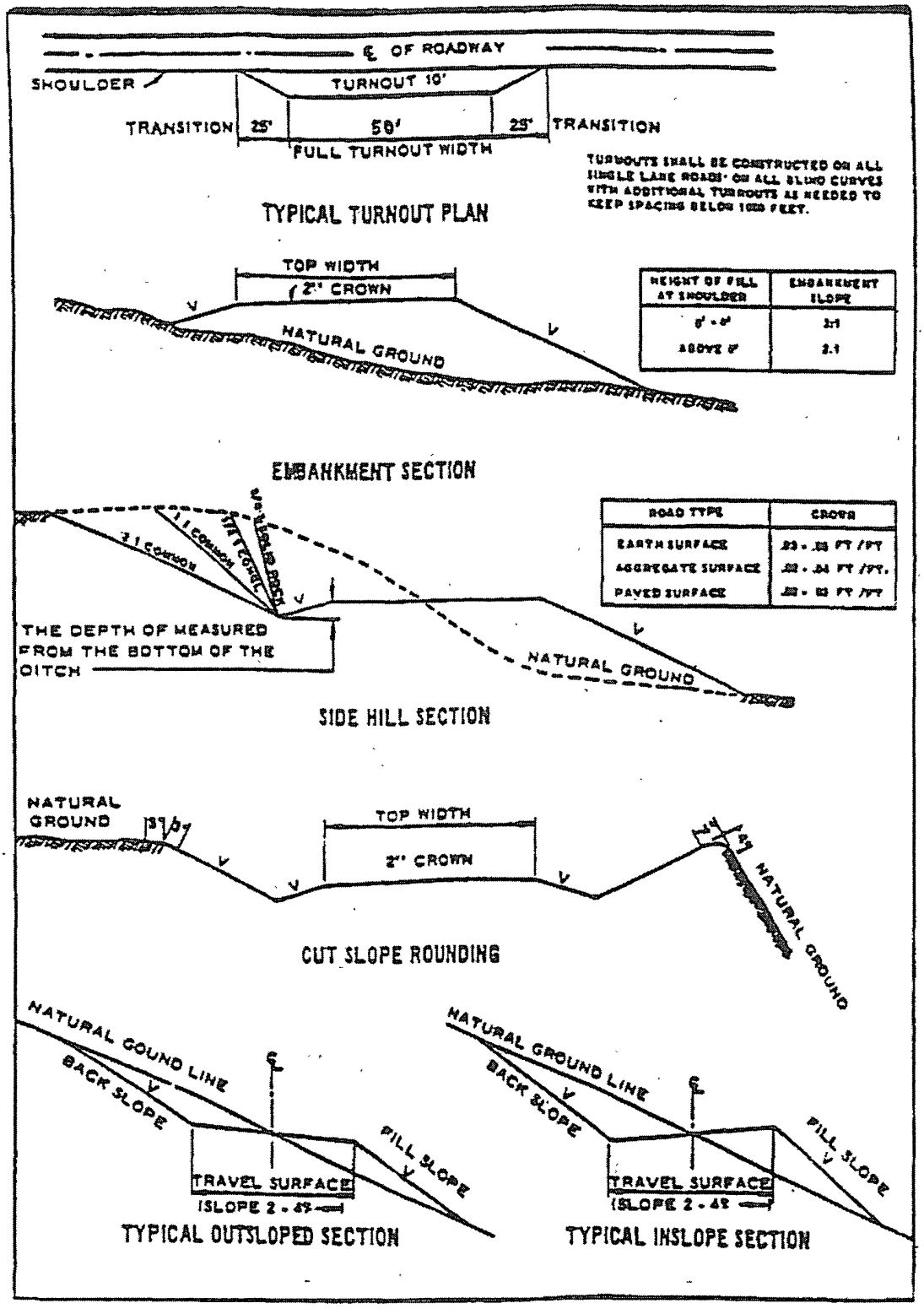
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts to the BLM.**

2. 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.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface. The logs shall be run at a speed which allows the logs to be legible and no faster than manufactures of the logging tools recommended speed. (R-111-P area only)

B. CASING

1. The **13-3/8** inch surface casing shall be set **above the salt at approximately 550** feet and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

High cave/karst.
Possible lost circulation in the Delaware and Bone Spring formations.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above. **Casing to be set a minimum of 100' and not more than 600' below the salt. Please provide WOC times to inspector for cement slurries.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Please provide WOC times to inspector for cement slurries.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

b. The results of the test shall be reported to the appropriate BLM office.

c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 122107

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. 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, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder 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.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder

of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will 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 will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement 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 Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

Flowline to run on the west side of the new construction of access road and on the south side of the existing road, to the battery at the #1H, due to playa area.

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture 3, for Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorised officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass (*Setaria magrostachya*)	1.0
Green Spangletop (*Leptochloa dubia*)	2.0
Side oats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.