ATS-11-913

OCD-HOBBS

R-111-POTASH

HOBBS OCD

FEB 13 2012

RECEIVED

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No: NM-15906

6 If Indian, Allotee or Tribe Name:

1a Type of Work: ☒ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No:

1b Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8 Lease Name and Well No: Snoddy Federal No. 20H <39073>

2 Name of Operator: Cimarex Energy Co of Colorado <162683>

9 API Well No: 30-025- 40447

3a Address: 600 N Marienfeld St Ste 600 Midland TX 79701

3b Phone No *(include area code)*: 432-571-7800

10 Field and Pool, or Exploratory: Salt Lake; Bone Spring <53560>

4 Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At Surface: 811 FNL & 644 FEL

At proposed prod Zone: 660 FNL & 330 FWL *Horizontal Bone Spring test*

11 Sec , T R M or Blk and Survey or Area: 26-20S-32E

14 Distance in miles and direction from nearest town or post office*

12 County or Parish: Lea

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
644'	640 acres	N2N2 160 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**
152'	MD 14096 TVD 9900	NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc)	**22 Approximate date work will start***	**23 Estimated duration**
3555' GR	10.01.11	25-30 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
Zeno Farris	Zeno Farris	8.8.11

Title: Manager Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/s/ Jesse J. Juen	/s/ Jesse J. Juen	2/3/2012
Title STATE DIRECTOR	**Office** 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 S 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)*

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR CONDITIONS OF APPROVAL

KZ 02/29/2012

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

FEB 21 2012

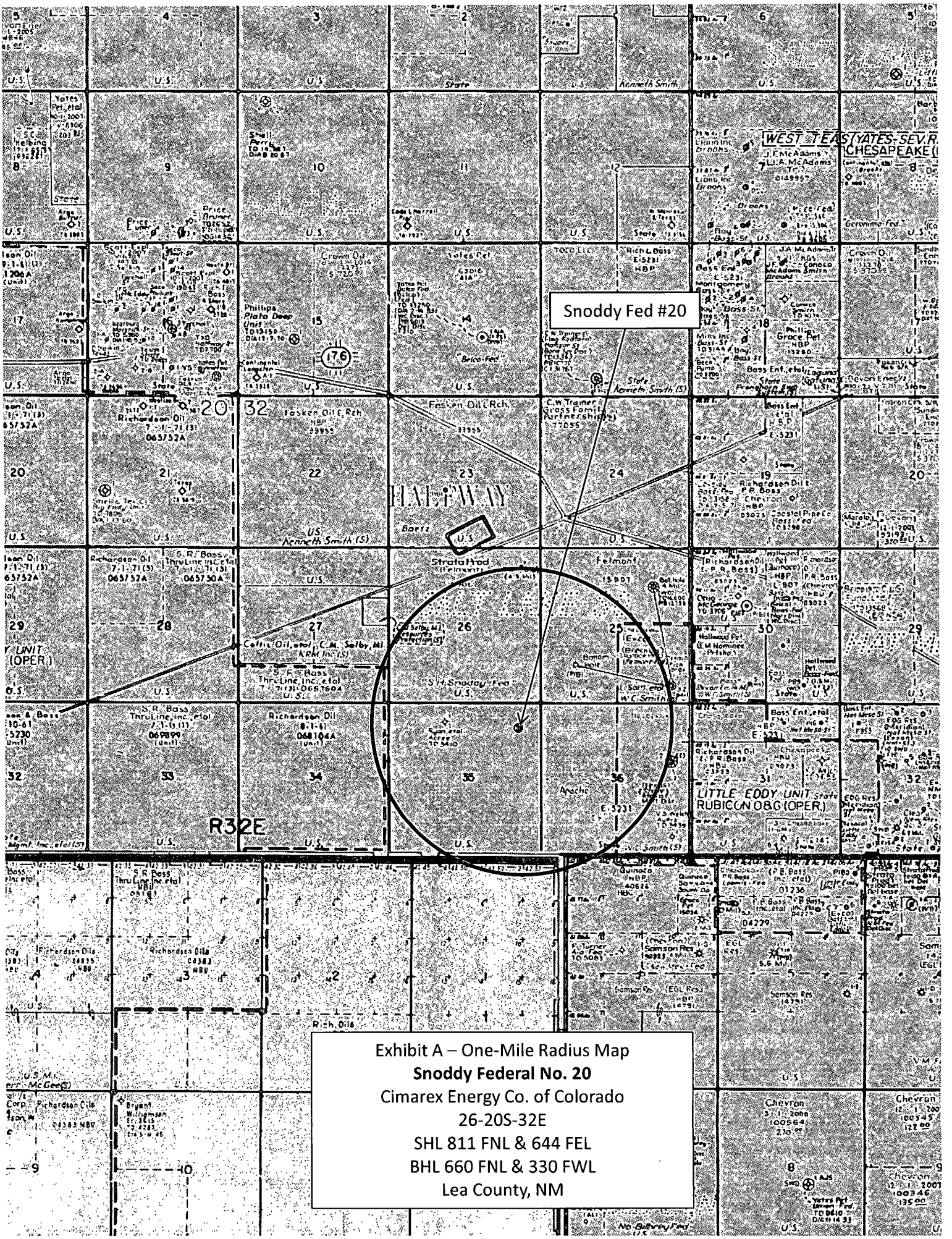
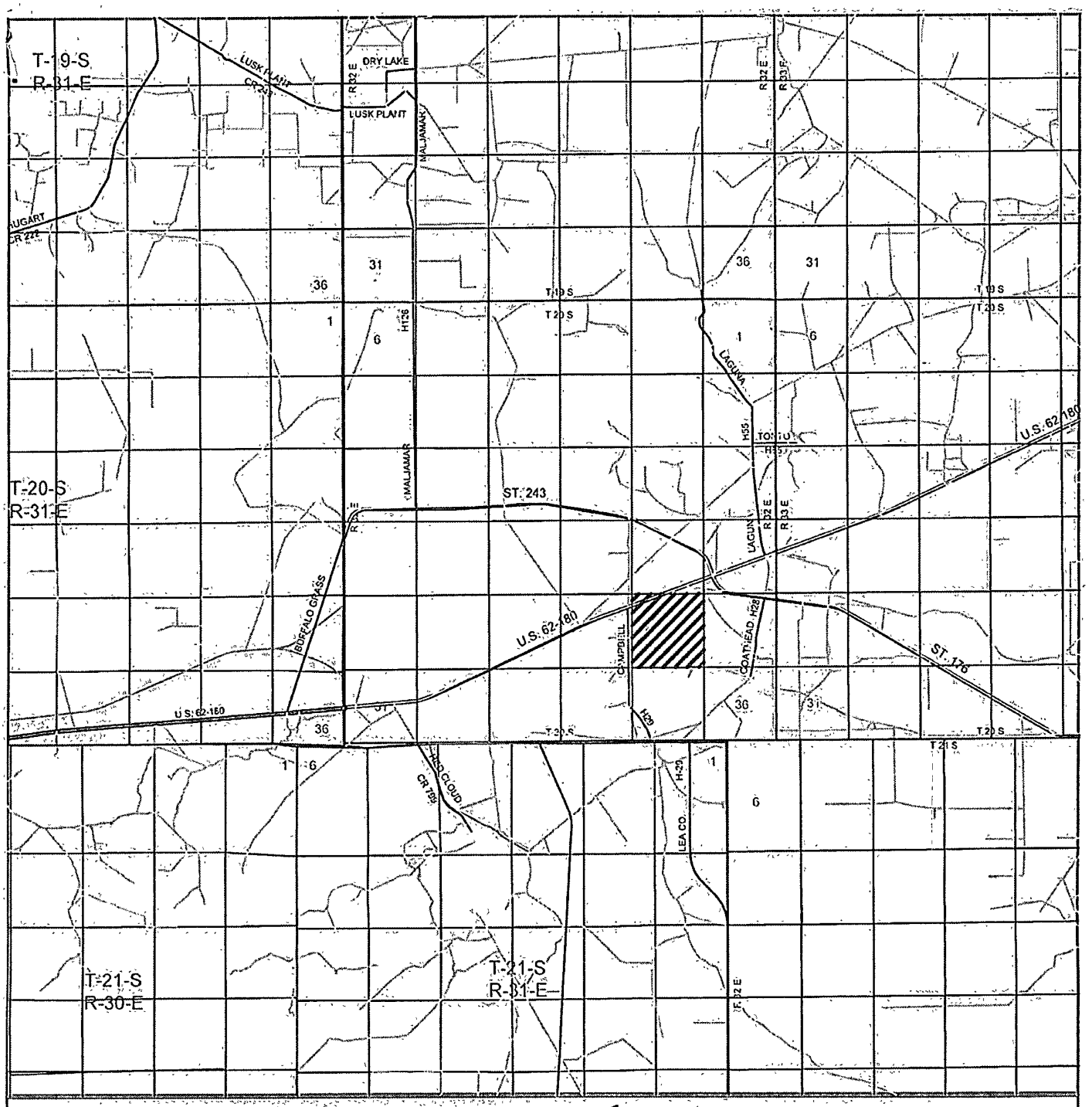


Exhibit A – One-Mile Radius Map
Snoddy Federal No. 20
Cimarex Energy Co. of Colorado
26-20S-32E
SHL 811 FNL & 644 FEL
BHL 660 FNL & 330 FWL
Lea County, NM



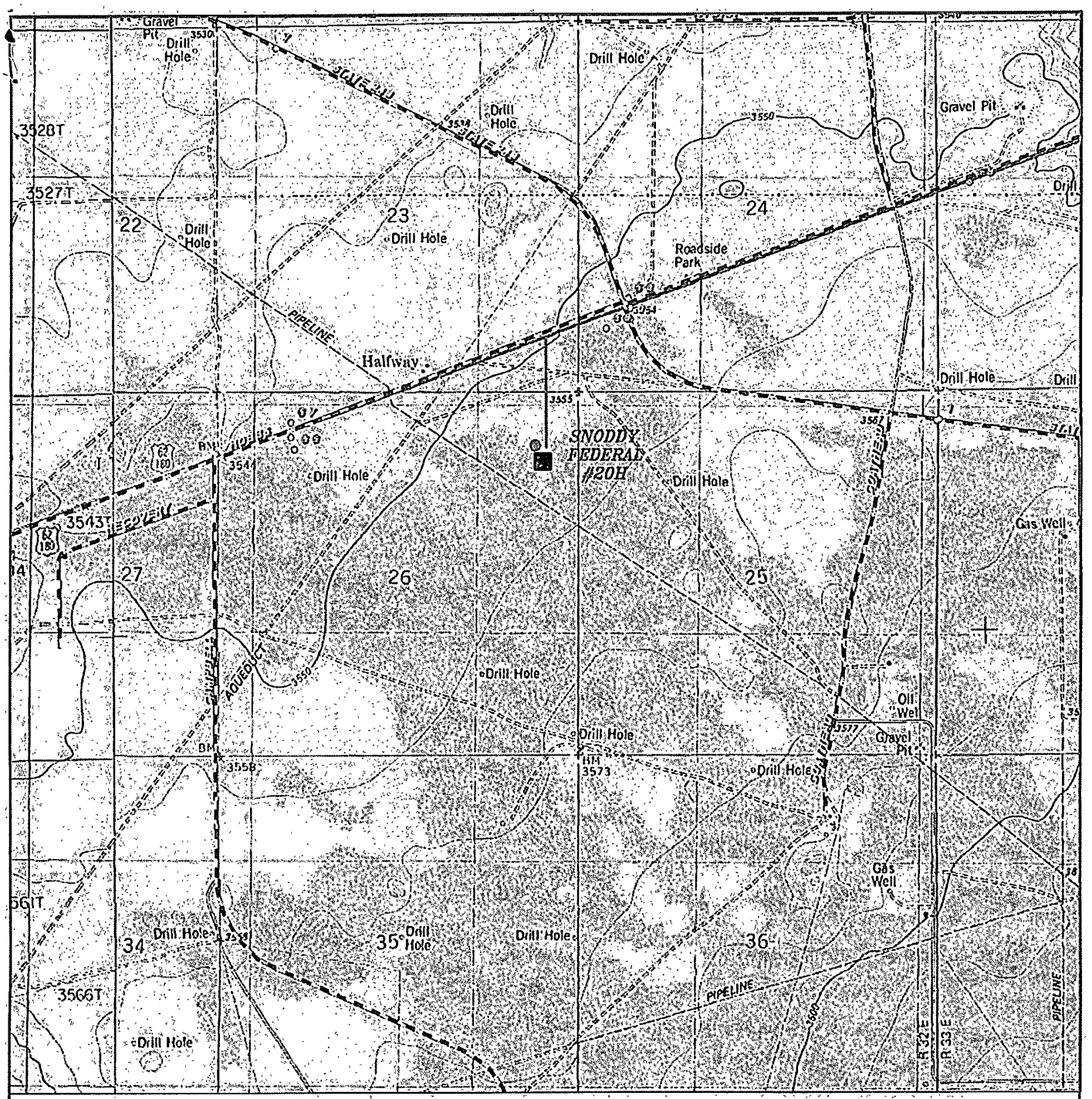
SNODDY FEDERAL #20H 44' per Tino 12/13/11 BS
Located 811' FNL and 611' FEL
Section 26, Township 20 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 24723
Survey Date:	06-22-2011
Scale:	1" = 2 Miles
Date:	06-29-2011

CIMAREX ENERGY CO. OF COLORADO

Exhibit B



SNODDY FEDERAL #20H ~~44~~ per 2mo 12/13/11 AA

Located 811' FNL and ~~611'~~ FEL ■ Battery

Section 26, Township 20 South, Range 32 East,

N.M.P.M., Lea County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

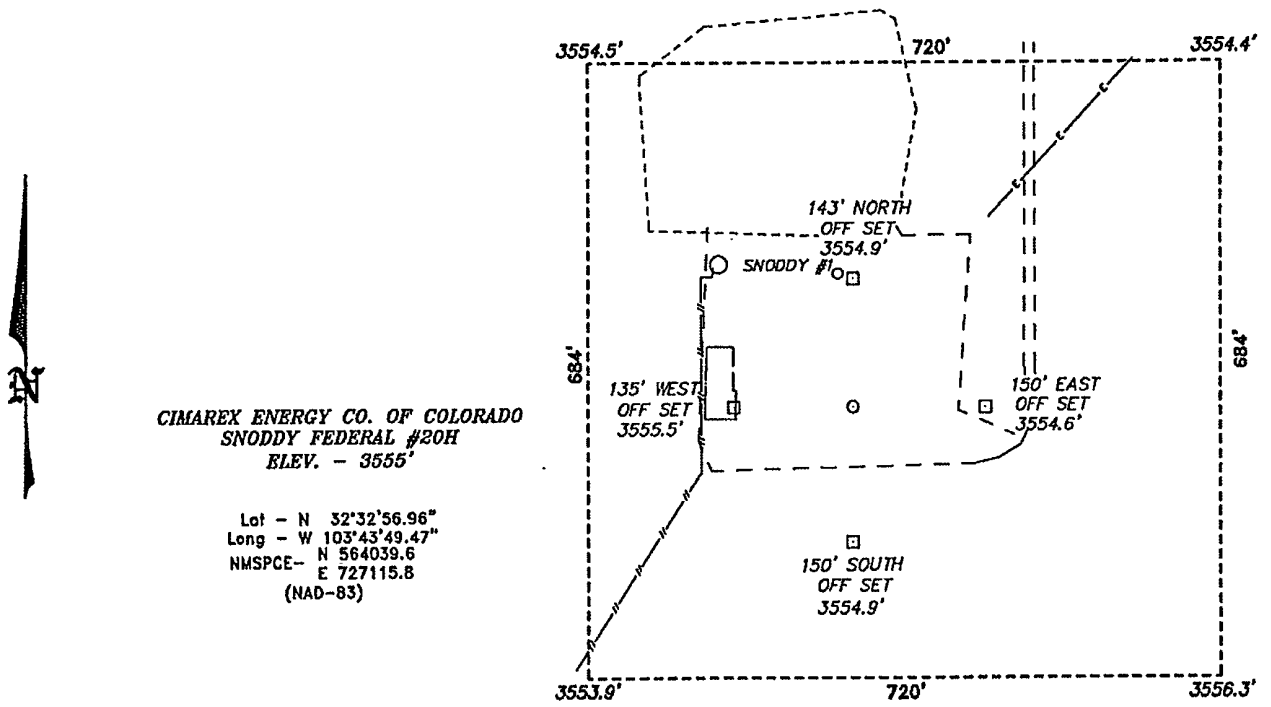
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 24723
Survey Date:	06-22-2011
Scale:	1" = 2000'
Date:	06-29-2011

CIMAREX ENERGY CO. OF COLORADO

Exhibit C

SECTION 26, TOWNSHIP 20 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.



CIMAREX ENERGY CO. OF COLORADO
SNODDY FEDERAL #20H
ELEV. - 3555'

Lat - N 32°32'56.96"
Long - W 103°43'49.47"
NMSPCE- N 564039.6
E 727115.8
(NAD-83)

200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

AT MILE MARKER 68, GO WEST ON HWY 62-180 FOR 0.25 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTH 0.3 MILES TO WELL PAD AND PROPOSED LOCATION.

CIMAREX ENERGY CO. OF COLORADO

REF: SNODDY FEDERAL #20H / WELL PAD TOPO

THE SNODDY FEDERAL #20H LOCATED 811' FROM THE NORTH LINE AND 644' FROM THE EAST LINE OF SECTION 26, TOWNSHIP 20 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 24723	Drawn By: J. SMALL		
Date: 06-29-2011	Disk: JMS 24723	Survey Date: 06-22-2011	Sheet 1 of 1 Sheets

Exhibit C-1

Application to Drill
Snoddy Federal No. 20H
Cimarex Energy Co of Colorado
Unit A, Section 26
T20S-R32E, Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 Location: SHL 811 FNL & 644 FEL
BHL 660 FNL & 330 FWL

2 Elevation above sea level: 3555' GR

3 Geologic name of surface formation: Quaternery Alluvium Deposits

4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: MD 14096 TVD 9900

6 Estimated tops of geological markers:

Rustler	1100'
Top Salt	1450'
Base Salt	2965'
Yates	3050'
Capitan	3410'
Delaware Sands	4700'
Brushy Canyon	6000'
Bone Spring	7900'
FBSS	8965'
SBSS	9520'
Base BS	10800'

7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to ~~1150'~~ 1290	8.4 - 8.6	28	NC	FW
~~0'~~ 1290 to 3000' ~~3085~~	10.0	30-32	NC	Brine water
3000' to 4650'	8.4-8.6	30-32	NC	FW,
4650' to 9614'	8.4-9.0	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean
9614' to 14096'	8.5-9.5	27-45	NC	2% KCL

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed drilling Plan

After setting surface 1 and 2 and intermediate casing, drill 8.75" hole to KOP @ 9614 and then kick off for 8.75" lateral. Drill to TD @ 14096 MD, 9900 TVD and set 5.5" casing from 0-14096 and cement as shown on following page.

Application to Drill
Snoddy Federal No. 20H
Cimarex Energy Co of Colorado
Unit A, Section 26
T20S-R32E, Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth			Casing OD		Weight	Collar	Grade
Surface 1	18 1/2"	0'	to	1290 1150'	New	16"	84#	STC	J/K-55
Surface 2	14 3/4"	0'	to	3525 3000'	New	11 3/4"	54#	STC	J/K55
Intermediate	10 5/8"	0'	to	4650'	New	8 5/8"	32#	LTC	N-80
Production	7 7/8"	0'	to	14096'	New	5 1/2"	17#	LTC	P-110

10 Cementing:

Surface Lead:1000SKS Halcem C + 2% CaCl 13.5ppg 1.75yield 100% Excess
Tail:340SKS Class C + 4% D20, 1% S001, 0.2% D46, 0.125 lb/sk D130 14.2ppg 1.34 yield 25% Excess
TOC Surface Centralizers per Onshorder 2.III.B.1.f

Surface 2 Lead:2000SKS Econocem + 5% Salt + 5# Gilsonite 13.5ppg 1.75yield 75% Excess
Tail:400SKS Halcem + 2% CaCl 14.2ppg 1.34 yield 25% Excess
TOC Surface

Intermediate Lead:1000SKS Econocem + 5% Salt + 5# Gilsonite 14.6ppg 1.54yield 70% Excess
Tail:300SKS Halcem + 1% CaCl 14.8ppg 1.34 yield 25% Excess
TOC Surface

Production Lead:3500SKS Econocem H + 0.5% CFR-3 + 0.1% HR-601 11.9ppg 2.44 yield 50% Excess
Tail:55SKS Versacem H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess
TOC 2800' Centralizers every 3rd joint in lateral to provide adequate cement coverage every 100' unless lateral doglegs require greater spacing between centralizers.

According to the NM State Enginner, depth to ground water is 40 feet. Fresh water zones will be protected by setting 16" casing at 1090, 11 3/4" casing at 3524 and 8 5/8" casing to 5465 and cementing to surface. Hydrocarbon zones will be protected by setting production casing at 14096 and cementing to surface.

Collapse Factor	*Burst Factor*	*Tension Factor*
1.125	1.125	1.6

11 Pressure control Equipment:

Exhibit "E". A 13⅝" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 5200.' A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas seperator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. BOP will be nippled up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the 16" surface pipe the well will be equipped with a 2M diverter system with rotating head (See Exhibit E-1). From the base of the 11 3/4" surface pipe through the runnning of the production casing the well will be equipped with a 5000 psi BOP system.

Before drilling out of the 16" surface pipe the diverter system will be tested to 250 psi low and 500 psi high by rig equipment. Before drilling out of 11 3/4" surface pipe BOP's will be tested to 250 psi low and 3000 psi high by an independent service company. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out of the intermediate pipe BOPS will be tested by an independent service company to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high.

Application to Drill
Snoddy Federal No. 20H
Cimarex Energy Co of Colorado
Unit A, Section 26
T20S-R32E, Eddy County, NM

Cimarex Energy Co of Colorado (operator) requests a variance if Cactus 115 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.
Manufacturer: Midwest Hose & Specialty
Serial Number: 63270
Length: 35' Size: 4-1/16" Ends - flanges/clamps
WP rating: 10,000 psi Anchors required by manufacturer – Yes/No

12 Testing, Logging and Coring Program: See cont

A. Mud logging program: 2 man unit from 5200 to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Strata does not anticipate that there will be enough H_2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H_2S Safety package on all wells, attached is an "H_2S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **4455 psi** Estimated BHT **130°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 30-35 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.
Bone Spring pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well.**

Cimarex Energy Co. of Colorado

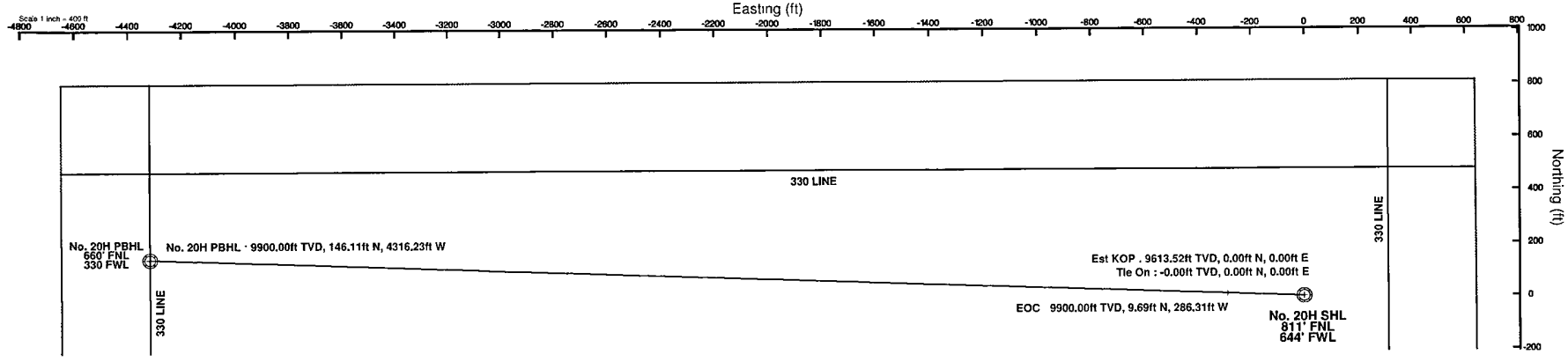
Location: Lea County, NM
Field: (Snoody) Sec 26, T2E, R32E
Facility: Snoody Federal No.20H

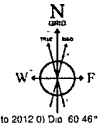
Slot: No. 20H SHL
Well: No. 20H
Wellbore: No. 20H PWB

BAKER HUGHES

Well Profile Data

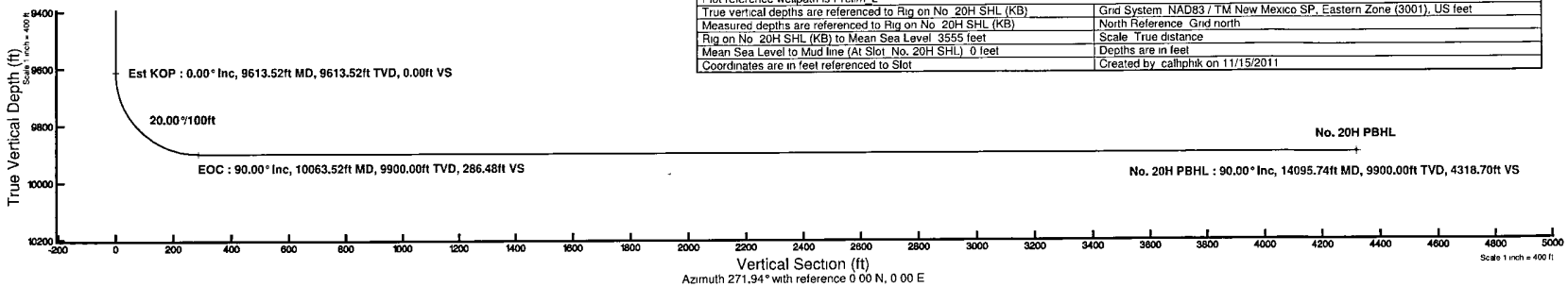
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	271.939	0.00	0.00	0.00	0.00	0.00
Est KOP	9613.52	0.000	271.939	9613.52	0.00	0.00	0.00	0.00
EOC	10063.52	90.000	271.939	9900.00	9.69	-286.31	20.00	286.48
No. 20H PBHL	14095.74	90.000	271.939	9900.00	146.11	-4316.23	0.00	4318.70





BGGM (1945.0 to 2012.0) Dip 60.46° Field 48807.5 nT
Magnetic North is 7.68 degrees East of True North (at 11/14/2011)
Grid North is 0.32 degrees East of True North
To correct azimuth from True to Grid subtract 0.32 degrees
To correct azimuth from Magnetic to Grid add 7.35 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.35 = 97.35

Plot reference wellpath is Prelim_2	
True vertical depths are referenced to Rig on No. 20H SHL (KB)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 20H SHL (KB)	North Reference: Grid north
Rig on No. 20H SHL (KB) to Mean Sea Level: 3555 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No. 20H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: calhphik on 11/15/2011



Azimuth 271.94° with reference 0.00 N, 0.00 E