

RE-SUBMITAL
N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Alamosa, NM 88410
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM56542
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR SDX Resources, Inc. (020451)		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. PO Box 5061, Midland, TX 79704 432/685-1761		8. FARM OR LEASE NAME, WELL NO. Culwin 35 Federal #3
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 424' FSL 848' FEL At proposed prod. zone Same		9. API WELL NO. 30-015-33449
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 12 miles SE of Loco Hills, NM		10. FIELD AND POOL, OR WILDCAT Shugart (Y,SR,QN,GB)
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drig. unit line, if any) (424')	16. NO. OF ACRES IN LEASE 80	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 35, 18S, 30E, P
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 805	19. PROPOSED DEPTH 4000'	12. COUNTY OR PARISH Eddy
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3509' GR		13. STATE NM
22. APPROX. DATE WORK WILL START* 06/01/04		

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JUN 07 2004

OOP-ARTESIA

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8" J-55	24#	650'	400 sx CI C
7-7/8"	5-1/2" J-55 or	14#	4000'	350 sx 50/50 POZ Tail
	4-1/2" J-55	9.5 - 10.6#		400 sx 35/65 POZ Lead

SDX Resources plans to drill a 12-1/4" hole to appx 650'. Set 8-5/8" surf csg & circ CI C cmt to surf. Drill 7-7/8" hole to TD (4000'). Run OH logs (LDT-CNL-GR & DLL). Run 4-1/2" or 5-1/2" csg & circ cmt to surf. Will perf & stimulate as necessary for optimum production.

Specific programs as per Onshore Oil & Gas Order #1 are outlined in the following attachments:

Drilling Program
Surface Use & Operating Plan
H2S Plan
Exhibit #1: BOP
Exhibit #2: Plat (Original on File)
Exhibit #3: Planned ROW's (access roads & flowlines)
Exhibit #4: One Mile Radius Map
Exhibit #5: Drilling Rig Layout
Letter of Responsibility

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED**

IN ABOVE SPACE DESCRIBE PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

24. SIGNED Bonnie Ottwater TITLE Regulatory Tech DATE 04/20/04

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY /s/ Linda S. C. Rundell TITLE STATE DIRECTOR DATE MAY 28 2004

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: SDX Resources, Inc. Telephone: 432/685-1761 e-mail address: cmorgan@sdxresources.com

Address: PO Box 5061, Midland, TX 79704

Facility or well name: Culwin Federal #3 API #: 30-015- U/L or Qtr/Qtr P Sec 35 T 18S R 30E

County: Eddy Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 20 mil Clay ☐ Volume _____ bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not. _____

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MAY 28 2004

000-ARTESIA

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>45 - 130'</u>	Less than 50 feet	(20 points)	
	50 feet or more, but less than 100 feet	(10 points)	
	100 feet or more	(0 points)	0 - 20
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)	
	No	(0 points)	0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)	
	200 feet or more, but less than 1000 feet	(10 points)	
	1000 feet or more	(0 points)	0
	Ranking Score (Total Points)		0 - 20

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 5/26/04

Printed Name/Title: Chuck Morgan, Engineer

Signature

Our certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: JUN 2 2004

Date:

Printed Name/Title

Signature

DRILLING PROGRAM

April 20, 2004

SDX Resources Inc.
511 W. Ohio, Suite 601
P.O. Box 5061
Midland, TX 79704
432/685-1761 Office
432/685-0533 Fax

Culwin 35 Federal #3
Sec. 35, T18S, R30E
Unit P, 424' FSL, 848' FEL
Eddy County, New Mexico
API 30-015-
Elevation: 3509' GR

Geologic Name of Surface Formation:

Permian

Geological:

Estimated Formation Tops –

Salt (Top)	750'
Salt (Base)	1850'
Yates	2160'
7-Rivers	2550'
Queen	3150'
Grayburg	3600'
San Andres	3900'

Estimated Depth of Anticipated Fresh Water, Oil or Gas:

Water Sands	200' – 250'	Fresh H2O
7-Rivers	2800'	Oil & Gas
Queen	3500'	Oil & Gas
Grayburg	3630'	Oil & Gas
San Andres	3900'	Oil & Gas

Fresh water sands will be protected by running 8-5/8" casing to a minimum depth of 650' and circulating cement. All other zones will be isolated by running 4-1/2" or 5-1/2" production casing and circulating cement.

Casing Program:

<u>Hole Size</u>	<u>Casing</u>	<u>Size/Wt.</u>	<u>Depth</u>	<u>Cement</u>
12-1/4"	8-5/8"	24#	650'	Circ.
7-7/8"	4-1/2" or 5-1/2"	9.5-17#	4000'	Circ.

Cement Program:

8-5/8" Surface Casing:	Cemented to surface with 400 sx of Class C with 2% CaCl ₂ and ¼ #/sx Flocele.
4-1/2" or 5-1/2" Production Casing:	Cemented with 350 sx of 50/50 Class C POZ with 6# Halad 322 and 400 sx of 35/65 POZ C with 3# salt/sx and ¼ #/sx flocele. This should circulate cement to the surface.

Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a bag-type (hydril) preventer (1000 psi WP). Unit will be hydraulically operated. BOP will be nipped up on the 8-5/8" surface csg and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. A 2" kill line and a 2" choke line will be included in the drilling spool. Other accessories to the BOP equipment will include a kelly cock.

Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of fresh water and brine water mud system. The applicable depth and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>VIS (sec)</u>	<u>Waterloss (cc)</u>
0 – 650'	Fresh water (spud)	8.5	40-45	N/C
650' – TD	Brine water, SWG, Starch	10	30	24

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

Auxiliary Well Control and Monitoring Equipment:

A kelly cock will be kept in the drill string at all times.

A mud logging unit complete with H₂S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 2000' to TD.

Logging, Testing and Coring Program:

No drillstem tests will be run.

The electric logging program will consist of GR-DLL and GR-CNDL from TD to 2000'.

Conventional coring may be performed in select intervals in the Seven River-Queen-Grayburg and/or San Andres.

Further testing procedures will be determined after the production casing has been cemented at TD based on drill shows and log evaluation.

Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

800 No abnormal pressure or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 94° F. and estimated at maximum bottom-hole pressure (BHP) is 1200 psig. No abnormal concentrations of hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. All H2S operation precautions will be followed (see attached H2S drilling operations plans). No major loss circulation zones have been reported in offsetting wells.

Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is June 1, 2004. Once commenced, the drilling operations should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

SDX Resources Inc.

Culwin 35 Federal # 3

424' FSL, 848' FEL

Sec. 35, T18S, R30E, Unit M

Eddy Co., NM

I. 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:

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

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

1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan.
4. Anticipated H₂S concentrations are below levels that would require a H₂S Contingency Plan as required by the NMOCD.

There will be an initial safety session just prior to commencing operations on the well. The initial session shall include a review of the site's 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.

II. H₂S SAFETY EQUIPEMNT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 750'.

1. Well Control Equipment:
 - A. Annular Preventer to accommodate all pipe sizes with properly sized closing unit.
2. Protective Equipment for Essential Personnel:
 - A. Mark II Surviveair 30-minute units located in the dog house.

3. H2S Detection and Monitoring Equipment:
 - A. 1 – portable H2S monitor positioned on location for best coverage and response.
 - B. Mud logging trailer shall have H2S monitoring equipment.
4. Visual Warning Systems:
 - A. Guy lines will be flagged and a wind sock will be positioned on location.
 - B. Caution/Danger signs shall be posted on roads providing direct access to location.
5. Mud Program:

The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, will minimize hazards when penetrating H2S bearing zones.
6. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service as necessary.
7. Communication:

Radio communications in company vehicles including cellular telephone and 2-way radio.
8. Well Testing:

No DST's are planned.

SURFACE USE AND OPERATING PLAN

SDX Resources Inc.
Culwin 35 Federal #3
424' FSL 848' FEL
Sec. 35, T18S, R30E, P
Eddy Co., NM

Existing Roads:

The well site and elevation plat for the proposed well is shown in Exhibit #2 (original on file). It was staked by Dan Reddy of Carlsbad, NM.

All roads to the location are shown in Exhibit #3. The existing roads are labeled and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the onsite inspection.

Directions to location: Go east from Loco Hills, New Mexico on Hwy 82 to CR 222. Turn right on CR 222 and go 6.8 miles to CR 250. Turn right on CR 250 and go 2.7 miles. Turn left on lease road and go .7 miles to cattleguard. Just past cattleguard follow road straight to battery. Just after cattleguard turn south to Culwin 35 Federal #4 stake. Proceed south ¼ mile & turn west to location.

Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on the lease.

Proposed Access Road:

Exhibit #3 shows the existing road and the new access road to be constructed. The road will be constructed as follows:

The maximum width of the running surface will be 15'. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify and additions or changes during the onsite inspection.

The average grade will be less than 1%.

No turnouts are planned.

No culverts, cattleguards, gates, low-water crossings or fence cuts are necessary.

Surfacing material will consist of native caliche. Caliche will be obtained from the nearest approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

The proposed access road as shown in Exhibit #3 has been centerline flagged by Dan Reddy of Carlsbad, NM.

Location of Existing Wells:

Exhibit #4 shows all existing wells within a one-mile radius of this well.

Location of Existing and/or Proposed Facilities:

SDX Resources Inc. operates production facilities on this lease. They are as follows:

Culwin 35 Federal – Tank Battery: NE/4 SE/4 of Sec. 35.

If the well is productive, contemplated facilities will be as follows:

2" – 3" SDR – 11 plastic flowline will be laid along the road to the Culwin #4 location & follow the Culwin #4 ROW to the existing battery as shown in Exhibit #3.

Any additional construction materials will be purchased from contractors.

If the well is reproductive, rehabilitation plans are as follows:

The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after the well is complete).

Topsoil removed from the drill site will be used to raconteur the pit area to the original natural level, as nearly as possible, and reseeded as per BLM specifications.

In the event that production is established flowline right of way has been staked to the Culwin #4 and is shown in Exhibit #3.

Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud systems as outlined in the drilling program. The brine water will be obtained from commercial water stations in the area and hauled to the location by transport truck over the existing and proposed access roads shown in Exhibit #3. A commercial fresh water source is nearby and fasline will be laid along existing roads and fresh water pumped to the well. No water well will be drilled on the location.

Source of Construction Materials:

All caliche required for construction of the drill pad and any new access road will be obtained from the drilling pits and/or on site when possible. Any additional caliche will be obtained from approved caliche pits. All roads and pads will be constructed of 6" of rolled and compacted caliche.

Methods of Handling Water Disposal:

Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.

Drilling fluids will be contained in plastic lined pits. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit, approximately 80' x 55' x 6' deep and fenced on three sides prior to drilling. It will be fenced on the fourth side immediately following rig removal. The reserve pit will be plastic lined (5-7 mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water.

Water produced from the well during completion may be disposed into the reserve pit after the well is permanently placed on production.

Garbage and trash produced during drilling or completion operations will be collected in a trash trailer by a contractor. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operation.

After rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 90 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and kept closed until it has dried. When the reserve pit is dry enough to breakout and fill and as weather permits the unused portion of the well site will be leveled and reseeded as per BLM specifications. Only that part of the pad required for production facilities will be kept in use.

Ancillary Facilities:

None

Well Site Layout:

The drill pad layout is shown in Exhibit #5. Dimensions of the pad and pits and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. Because the pad is almost level no major cuts will be required.

Exhibit #5 shows the planned orientation for the rig and associated drilling equipment, reserve pit, trash pit, pipe racks, turn-around, parking areas and access road. No permanent living facilities are planned but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

The reserve pit will be lined with high-quality plastic sheeting (5-7 mil thickness).

Plan for Restoration of the Surface:

Upon completion of the proposed operation, if the well is to be abandoned, the pit area, after allowing to dry, will be broken out and leveled. The original top soil will be returned to the entire location which will be leveled and contoured to as nearly the original topography as possible.

All trash and garbage will be hauled away and pit lining will be buried when the pits are filled and the location leveled within 120 days after abandonment.

The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.

Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed, the reserve pit will be fenced on the rig (fourth) side. The fencing will remain in place until the pit area is cleaned-up and leveled. No oil will be left on the surface of the fluid in the pit.

Upon completion of the proposed operations, if the well is completed, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from any area of the original drill site not needed for production operations or facilities will be removed and used for construction of thicker pads. Any additional caliche required for facilities will be obtained from an approved caliche pit. Topsoil removed from the drill site will be used to recontour the pit area and any unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

Surface Ownership:

The well pad is located on Federal surface.

Other Information:

The area around the well site is grassland. The vegetation is native scrub grasses with abundant catclaw and mesquite.

There is no permanent or live water in the immediate area.

An Archaeological Survey is on file in your office.

Lessee's and Operator's Representative:

The SDX Resources Inc. representative for assuring compliance with the surface use plan is as follows:

Chuck Morgan
SDX Resources Inc.
PO Box 5061
Midland, TX 79704
432/685-1761 Office
432/697-7032 Home

Certification:

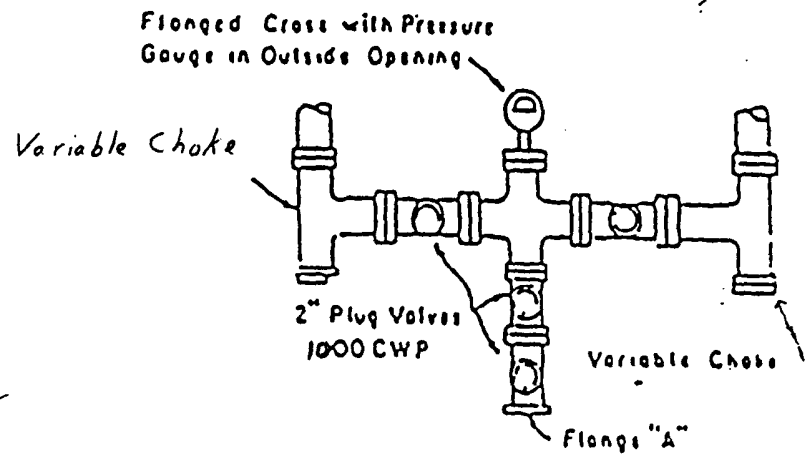
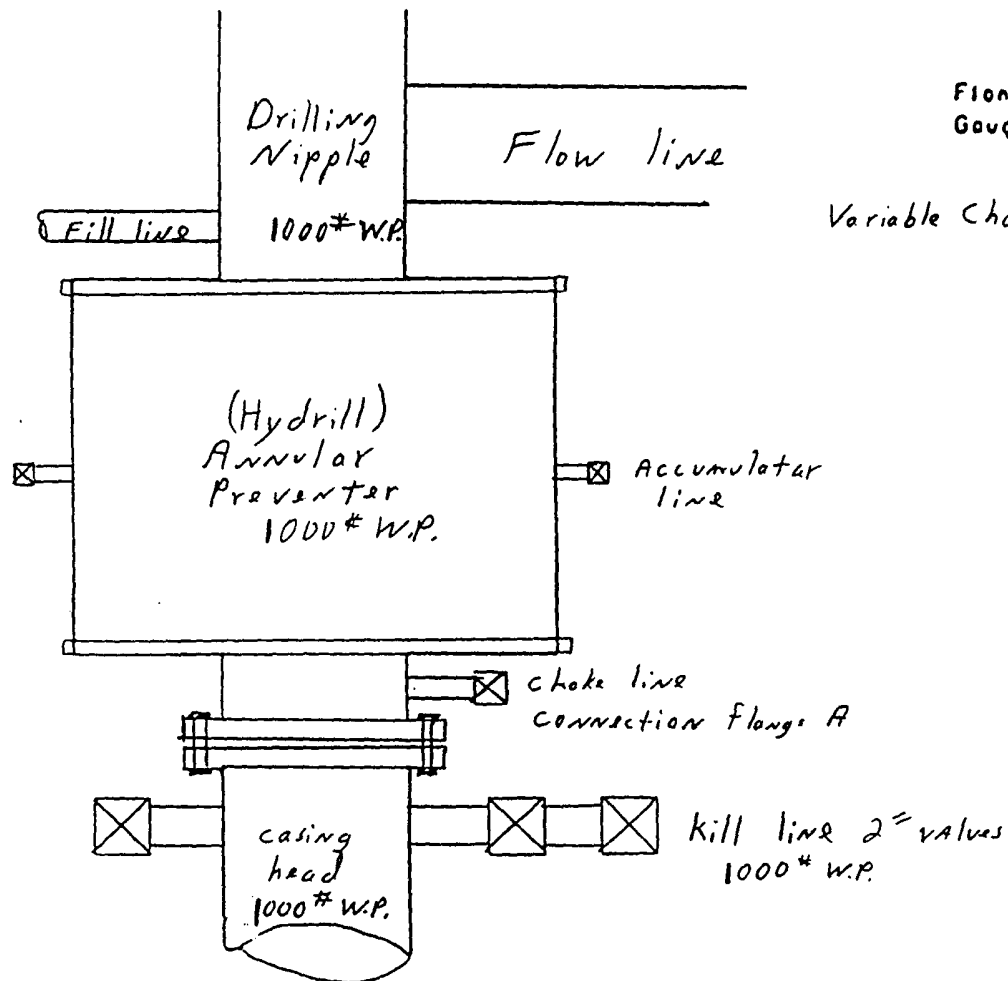
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by SDX Resources Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved.

April 20, 2004

SDX Resources Inc.



John Pool, Vice President



PLAN VIEW-CHOKES MANIFOLD

Exhibit #1

☐ AMENDED REPORT

~~NM PEGPS NO 5412~~

Sub. Lit # 2 Dis. 10

R30E

T 18 S

SEC. 35

PROPOSED
SDX RESOURCES, INC.
CULWIN 35 FED. #4

PROPOSED
ACCESS
ROAD

PROPOSED
SDX RESOURCES, INC.
CULWIN 35 FED. #3
424' FSL
848' FEL

547'
345'

424' 848'

5280.00' S89°56'00" W GLO RECORD

5280.00' N00°01'00" W GLO RECORD

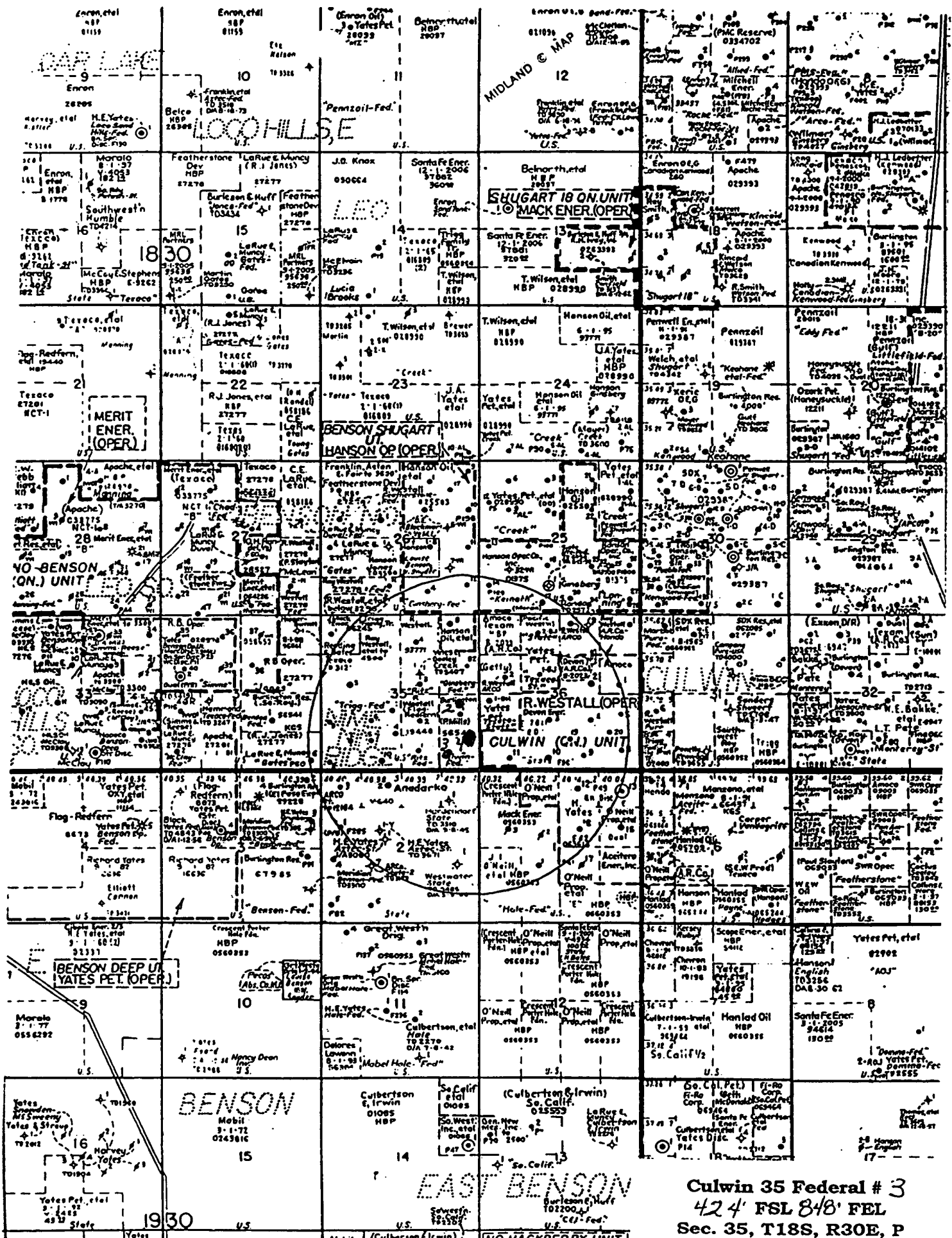
Exhibit #3A

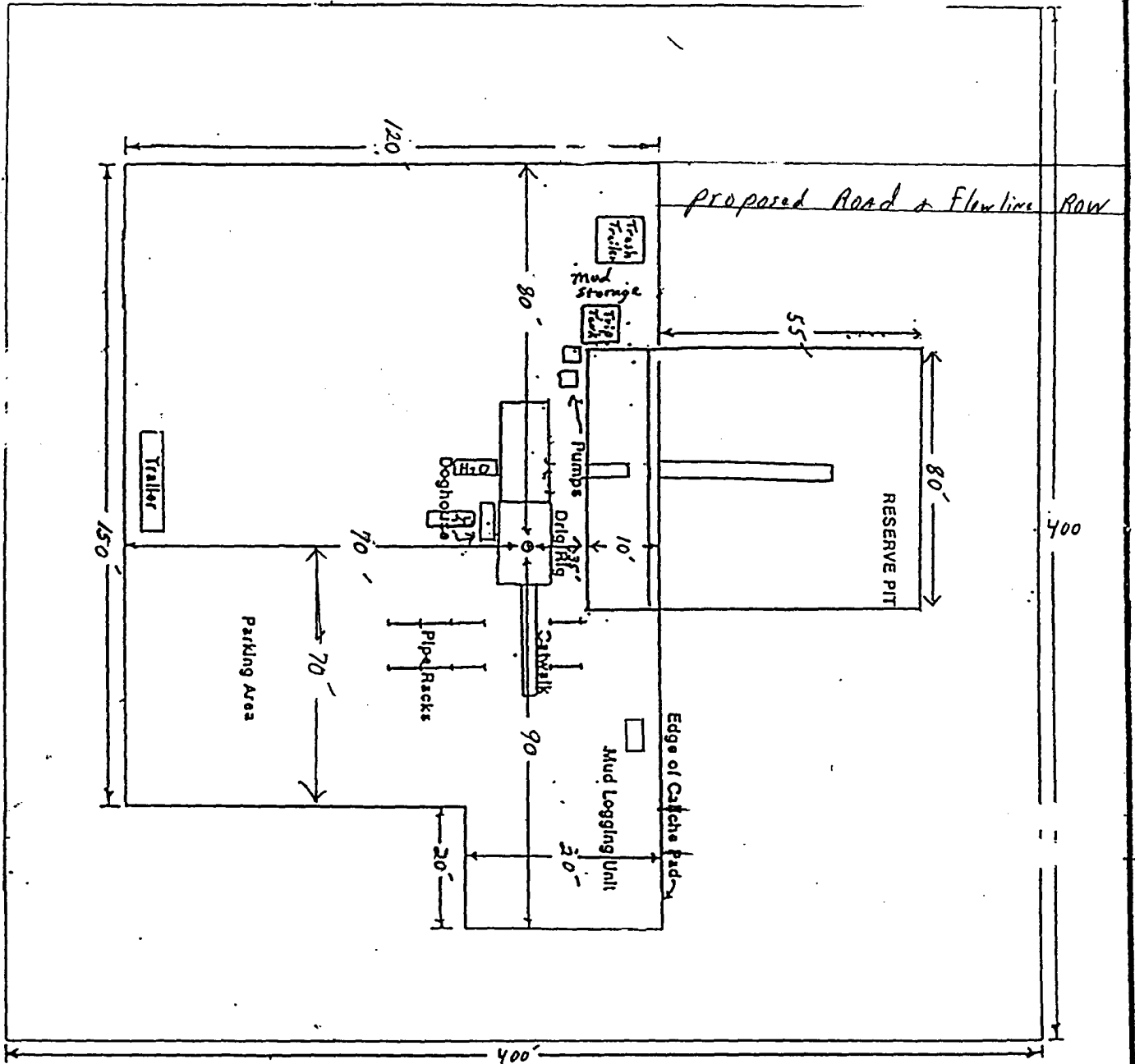


CONTOUR INTERVAL:
HACKBERRY LAKE - 10'

HACKBERRY LAKE, N.M.

**JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117**





SDX RESOURCES, INC.

Drilling Rig Layout

Culwin #3



STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

SDX Resources Inc.
P.O. Box 5061
Midland, TX 79704
432/685-1761

April 20, 2004

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.:	NM-56542
Lease Name:	Culwin 35 Federal #3
Legal Description of Land:	Unit P, 424' FSL, 848' FEL Sec. 35, T18S, R30E Eddy Co., NM
Formation(s):	Shugart (Yates, SR, QN, GB)
Bond Coverage:	Statewide Bond – State of New Mexico
BLM Bond File No.:	NM2307

Authorized Signature:



John Pool
Vice-President